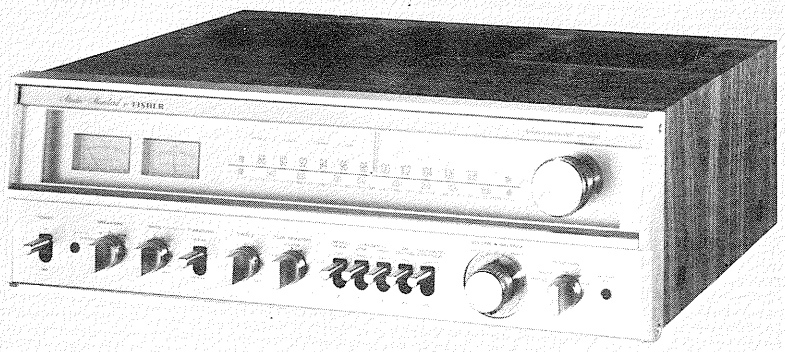
SERVICE MANUAL

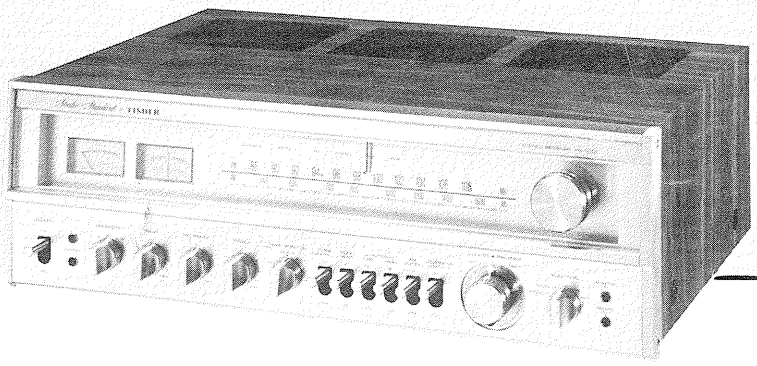
FISHER

RS-1056
RS-1058

Stereo Receivers



RS-1056



RS-1058

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DISASSEMBLY INSTRUCTIONS

Removal Of Chassis From Cabinet
1. Remove 4 screws from left and right sides of cabinet.
2. Separate cabinet from chassis.
3. Remove 18 screws from bottom of cabinet. (Do Not Remove Leg From Bottom Of Cabinet).
4. Separate bottom of cabinet from chassis.

Removal Of Front Panel Assembly
1. Remove all Knobs
2. Remove 4 screws from top of panel.
3. Remove 5 screws from bottom of Panel.
4. Remove nut from "Function", "Speaker" and "Tape monitor" switches located on Front Panel Assembly.
5. Separate Front Panel Assembly from chassis.

Removal Of Meters
1. Remove One screw and Meter Cover.
2. Unsolder leads from meter terminals.
3. Grasp Meter firmly and pull back separating Meter from panel.

Removal Of Slide Rail Pointer
1. Remove Metal Slide Pointer from Slide Rail Pointer.
2. Remove 2 screws from top of Slide Rail Pointer.

Removal Of AM-FM Stereo Function Indicator Lamps
1. Grasp base of lamp with long-nosed Pliers and Carefully extract from grommet holder.
2. Unsolder AM-FM Indicator Lamp from P.C. Board.

Removal And Replacement Of Dial Lamps
1. Remove Dial P.C. Board from Shelter Light with two flaps straight.
2. Grasp Dial Lamp and extract from lamp grommet holder.

Removal Of Front End
1. Unscrew 2 screws from Drum. (Do Not Remove Dial String From Drum).
2. Remove 4 screws releasing clip holding Front End.
3. Remove 4 screws from bottom of Front End.

Testing and troubleshooting any of the P.C. boards do not require removal since all component parts are top board mounted. For underneath board inspection purposes or when a defective component is to be unsoldered and replaced, the P.C. board can be sufficiently turned over by only removing the hold down hardware. Where it necessitates complete removal of any individual board then proceed as follows.

Removal Of AM-FM RF/IF/MPX Amp P.C. Board
1. Unsolder wire wraps from terminals.
2. Remove 4 hold down screws.

Removal Of Power Amp P.C. Board
1. Unsolder wire wraps from terminals.
2. Remove 5 hold down screws.

Removal Of Power Supply P.C. Board
1. Unsolder wire wraps from terminals.
2. Remove 4 hold down screws.

Removal Of EQ-Amp P.C. Board
1. Unsolder wire wraps from termianls.
2. Remove 5 hold down screws.

Removal Of Speaker Protection P.C. Board
1. Unsolder wire wraps from terminals.
2. Remove 5 hold down screws.

Removal Of Tone Control Amp P.C. Board
1. Unsolder wire wraps from terminals.
2. Remove 6 screws from 6 Levers switch.
3. Remove 2 nuts from variable resistors. (RS-1056)
   Remove 3 nuts from variable resistors. (RS-1058)

Removal Of Power Transistor (Q01～Q04)
1. Remove Cover 4 screws from top and bottom of Plate Heat Sink.
2. Remove 2 screws holding Power Transistor.

RECOMMENDED TEST EQUIPMENT

The following test equipment is recommended to completely test and align the Receiver.

- Line Voltage Isolation Transformer.
- AC DC Multimeter.
- Accurately Calibrated AC Voltmeter.
- Oscilloscope (Flat to 100 KHz Minimum)
- Low-Distortion Audio Sine-Wave Generator
- Harmonic Distortion Analyzer
- Two (2) Load Resistors, 8-ohms, 250 Watts (Minimum Rating)
- Low-Distortion AM-FM Signal Generator
- 10.7 MHz Sweep Generator
- Multiplex Generator
- 455 KHz Sweep Generator

HARMONIC DISTORTION TEST

CAUTION: Limit the following tests to no more than ten minutes each. Use 8-ohm resistors with a minimum power rating of 250 watts when connecting a load across the SPEAKERS terminals.

CONTROL SETTINGS:

Unplug the AC power cord and set the front panel controls as follows;

BASS, MID, TREBLE, and BALANCE controls to center positions
POWER switch to OFF
SPEAKERS switch to PHONES
FUNCTION switch to AUX
HIGH & LOW,FILTER, MONO MODE, LOUDNESS CONTOUR and TAPE MONITOR switch to OFF and SOURCE
VOLUME control to MINIMUM position
LEFT CHANNEL DRIVEN

ONE CHANNEL DRIVEN:

1) Connect a low distortion audio generator to LEFT AUX IN jack. Set generator frequency to 1 KHz and output to minimum.
2) Connect an 8-ohm load resistor between SPEAKERS MAIN LEFT and COM terminals.
   Connect a Harmonic Distortion analyzer and an AC VTVM in parallel across the 8-ohm load.
3) Connect the AC power cord and set SPEAKERS switch to MAIN. Turn VOLUME control to MAX.
4) Increase generator output for
   RS-1056 68W RMS (23.3V across the 8-ohm load)
   RS-1058 90W RMS (26.8V across the 8-ohm load)
   Harmonic Distortion Analyzer should measure 0.1 % distortion or less.
5) Repeat steps 1 through 4 for RIGHT CHANNEL.

BOTH CHANNELS DRIVEN

Connect 8-ohm load resistors across LEFT and RIGHT MAIN SPEAKERS terminals. Push down "MONO" switch. Adjust generator output and "BALANCE" control for RS-1056: 68W/RS-1058: 90W at Left and Right Channels (RS-1056: 23.3V /RS-1058: 26.8V) across the 8-ohm loads. Harmonic Distortion Analyzer should measure 0.1% distortion or less at each channel.

ADJUSTMENT OF THE POWER AMP. P.C. BOAD

BEFORE ADJUSTMENT

1. Disconnect the PRE OUT/MAIN IN connector.
2. After the power switch is turned ON, allow a few minutes marking adjustment, to be sure of the most stable operation.
3. Connect dummy load resistors (8 ohm) to the speaker terminals.
4. Use DC V.T.V.M. or Circuit Tester (input impedance: More than 50k ohm/V)

(A) IDLING CURRENT ADJUSTMENT
Adjust VR01 (VR02) for an idling current of 30mA, Measure the voltage at both sides of R65 (R66) resister (0.47 ohm) and Adjust VR01 (VR02) to indicate 14mV ±2mV.

Note: Polarity of Emitter of Q01 (Q02) is (+) Mid-Point is (–).

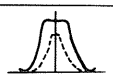
(B) a. Turn the semi-fixed variable resistor slowly during adjustment.
b. Be careful of the polarity of each measurement point.

Nominal Specifications For Information Only.

RECEIVERS	RS-1056	RS-1058
POWER AMPLIFIER SECTION Continuous RMS sine wave power per channel within stated bandwidth at no more than stated distortion and with an 8 ohm load.	68 W x 2	90W x 2
Power Bandwidth	20Hz/20kHz	20Hz/20kHz
Total Harmonic Distortion	0.1 %	0.1 %
PREAMPLIFIER SECTION Input Sensitivity and Impedance At rated output, 8-ohms at 1kHz		
Phono (1 and 2)	2mV/ 50k ohm	2mV/ 50k ohm
Phono (max input capability)	180mV	180mV
Auxiliary	150mV/100k ohm	150mV/100k ohm
Tape Monitor (1 and 2)	150mV/100k ohm	150mV/100k ohm
Hum & Noise (below rated output)		
Phono (1 and 2)	76 dB	76 dB
Auxiliary	90 dB	90 dB
Tape Monitor (1 and 2)	90 dB	90 dB
Frequency Response		
Phono (RIAA EQUALIZED ±2 dB)	30Hz - 15kHz	30Hz - 15kHz
Auxiliary input±2 dB	20Hz - 20kHz	20Hz - 20kHz
Tape Monitor input ±2 dB	20Hz - 20kHz	20Hz - 20kHz
Bass Control Range (at 100Hz)	±10 dB	±10 dB
Treble Control Range (at 10kHz)	±10 dB	±10 dB
Mid Range (at 1.5kHz)	–	±10 dB
Loudness Contour (at 30 dB volume attenuation)	+8 dB at 100Hz +4 dB at 10kHz	+8 dB at 100Hz +4 dB at 10kHz
High Filter	–6 dB (5kHz)	–6 dB (5kHz)
Low Filter	–6 dB (60Hz)	–6 dB (60Hz)
Separation (Stereo) @ 1kHz	40 dB	40 dB
POWER SECTION INPUT	150mV/100k ohm	150mV/100k ohm
FM TUNER SECTION Mono	1.7 μV / 9.8 dBf	1.7 μV/ 9.8 dBf
Usable Sensitivity Stereo	4.3 μV/17.9 dBf	4.3 μV/17.9 dBf
50 dB Quieting Sensitivity Mono	2.5 μV/13.2 dBf	2.5 μV/13.2 dBf
Stereo	34 μV/ 35.9 dBf	34 μV/ 35.9 dBf
Capture Ratio	0.8 dB	0.8 dB
Alt Channel Selectivity +400kHz	75 dB	75 dB
Image Response Rejection	80 dB	80 dB
Spurious Response Rejection	100 dB	100 dB
AM Rejection	65 dB	65 dB
Signal-to-Noise Ratio (Mono & Stereo)	75/ 70 dB	75/70 dB
Total Harm. Distortion (Mono & Stereo) 6kHz	0.15/ 0.25 %	0.15/ 0.25 %
50 dB Quieting Sensitivity THD Mono	0.3 %	0.3 %
Stereo	0.4 %	0.4 %
Stereo Separation (1 kHz/10 kHz)	45/36 dB	45/36 dB
Sub-Carrier Suppression (19/38 kHz)	60/70 dB	60/70 dB
AM TUNER SECTION Sensitivity	300 μV/m	300 μV/m
Selectivity	43 dB	43 dB
Signal-to-Noise Ratio	55 dB	55 dB
Image Frequency Rejection	56 dB	56 dB
IF Rejection	70 dB	70 dB
GENERAL SECTION Power Requirements (50/60 Hz)	120V AC ±10 %	120V AC ±10 %
Power Consumption	400W /498VA	500W /612VA
AC Outlets	2	2
Dimensions H x W x D (Inches)	6-13/16" x 20-3/4" x 14-1/4"	6-13/16" x 20-3/4" x 14-1/4"
Weight (Lbs.)	31.3	32.4

AM-FM MULTIPLEX ALIGNMENT

AM ALIGNMENT

Step	Adjusting circuit	Connection		SG. frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to VC4.	Connect oscilloscope to test point Pin No. 8	455 KHz	Near max. capacity of VC at position with no signal.	AM 1st 9-21310 AM DET 9-21291	 455 KHz
2	RF	Connect standard loop antenna to output terminal of SG. Place receiver 2 feet from loop antenna	Connect V.T.V.M. to Pin No. 8	600 KHz (400Hz. 30 % modulation)	600 KHz	AM ANT 9-25040 AM OSC 9-20880	Max.
3				1400 KHz (400Hz, 30 % modulation)	1400 KHz	TC 5 TC 6	Max.
4	Repeat adjustments.						

1. Variable capacitor completely closed.
2. Set the dial pointer to very left line dial scale.
3. Connect sweep generator, SG, V.T.V.M. and oscilloscope.
4. Function switch to "AM."
5. Use a screwdriver with plastic grip for all adjustments.

FM ALIGNMENT

Step	Adjusting circuit	Connection		SG.frequency	Position of tuning dial	Adjustment	V.T.V.M. Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to test point VC3 through 0.01μF.	Connect oscilloscope to test point TP 7 IC 02 Pin No. 13	10.7 MHz (none modulation)	Near max.capacity of VC. at position with no signal.	IFT In FRONT END	10.7MHz
2	Ratio Det.		Connect oscilloscope to test point TP 1			FM QUADRATURE COIL. 9-21320	
3	RF	Connect FM SG. to FM ANT terminals.	Connect V.T.V.M. to speaker terminal.	90 MHz (400 Hz, 30 % modulation)	90 MHz	LA LR	Max.
4				106 MHz (400 Hz, 30 % modulation)	106 MHz	TCA TCR	Max.
5	Repeat adjustments.						

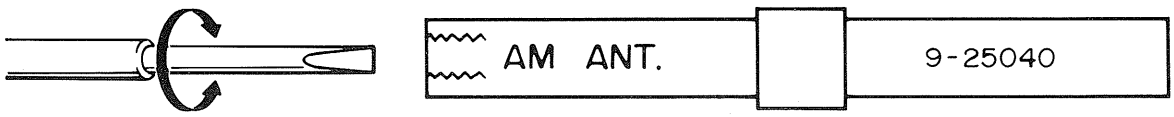
1. Variable capacitor completely closed.
2. Set the dial pointer to very left line of dial scale.
3. Connect sweep generator, FM SG, V.T.V.M. and oscilloscope. FM ANT input impedance is 300 ohm.
4. Function switch to "FM."
5. Use a screwdriver with plastic grip for all adjustments.

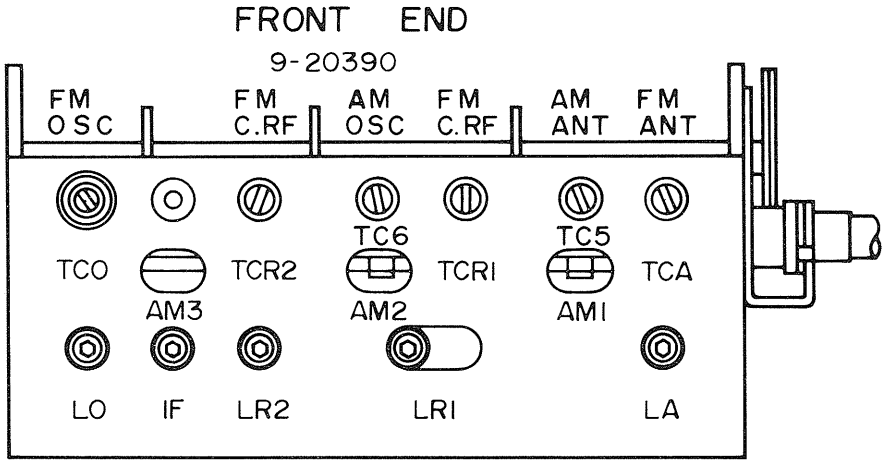
FM MPX ALIGNMENT

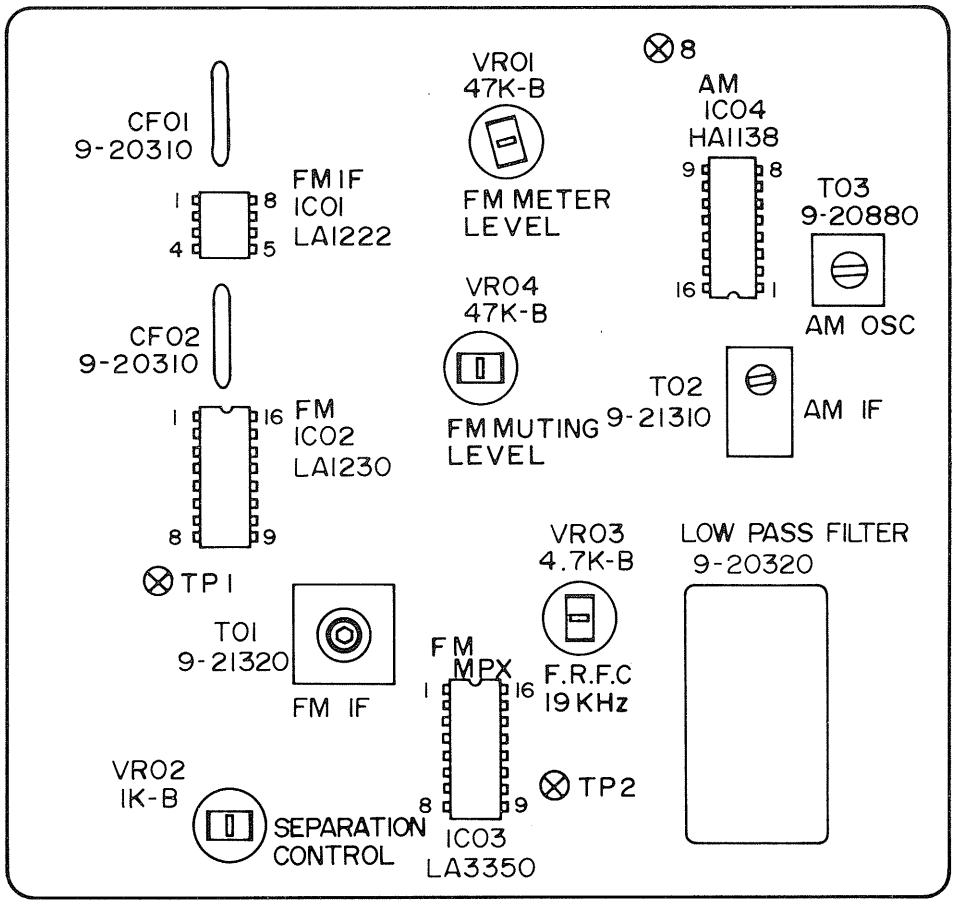
Step	Adjusting circuit	Connection		Position of tuning dial	Adjustment	
		Input	Output			
1	PLL IC FO (19 KHz) Adjustment	None	Connect Frequency counter or synchroscope to TP 2	Near max. capacity of VC. at position with no signal.	Adjust VR 03(4.7K-B) so that 19 KHz may be indicated on the frequency counter or synchroscope.	
2	FM STEREO Signal Separation	Connect FM stereo SG to FM ANT terminals. 19 KHz signal ON. Main channel, sub channel signal ON. Add 1000 Hz signal from L Ch.	Connect V.T.V.M. to output terminal (R channel).		VR 02 (1K-B)	V.T.V.M. Min.
		Connect FM stereo SG to FM ANT terminals. 19 KHz signal ON. Main channel, sub channel signal ON. Add 1000 Hz signal from R Ch.	Connect V.T.V.M. to output terminal (L channel)			
3	Repeat steps 1, 2, Set at position with max. channel separation.					

1. Variable capacitor completely closed.
2. Connect FM stereo SG and V.T.V.M.
3. Function switch to "FM"
4. Use a screwdriver with plastic grip for all adjustments.

AM-FM RF/IF MPX BOARD LAYOUT



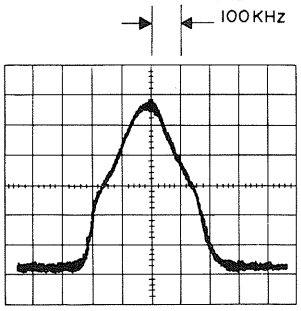




ALIGNMENT WAVE FORMS

WITH OSCILLOSCOPE TIME BASE SETTINGS

FM IF CURVE



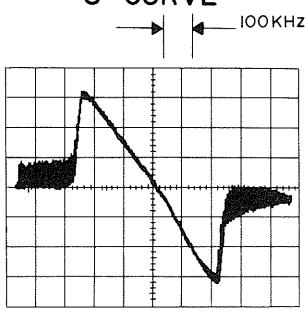
Vertical Sensitivity: 0.5V/cm.

Horizontal Sweep: 100 usec./cm.

IF FREQ.

FM IF ALIGNMENT

S-CURVE

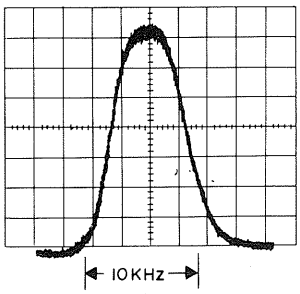


Vertical Sensitivity: 0.5V/cm.

Horizontal Sweep: 100 usec./cm.

FM DETECTOR ALIGNMENT

AM IF CURVE

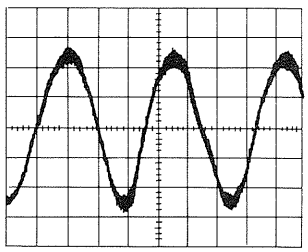


Vertical Sensitivity: 0.5V/cm.

Horizontal Sweep: 100 usec./cm.

AM IF ALIGNMENT

SINE WAVE

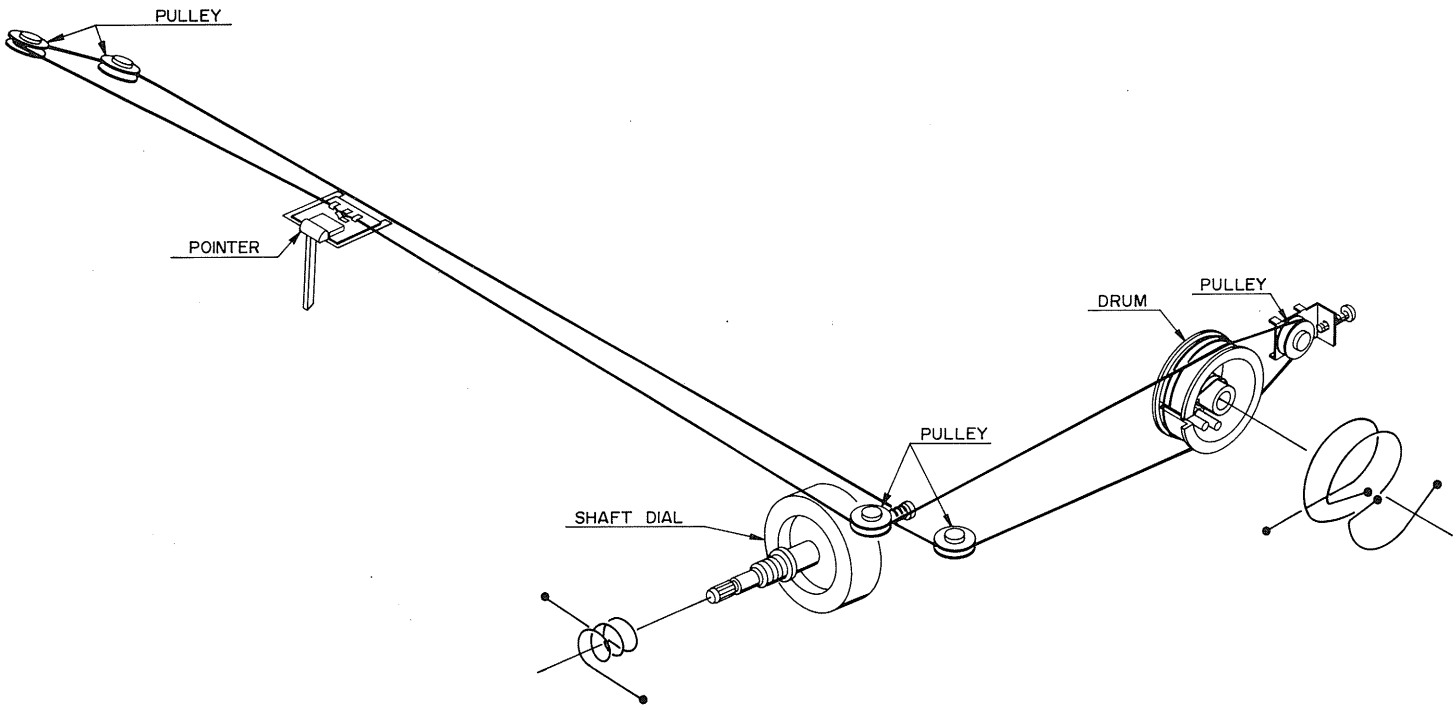


Vertical Sensitivity: 0.5V/cm.

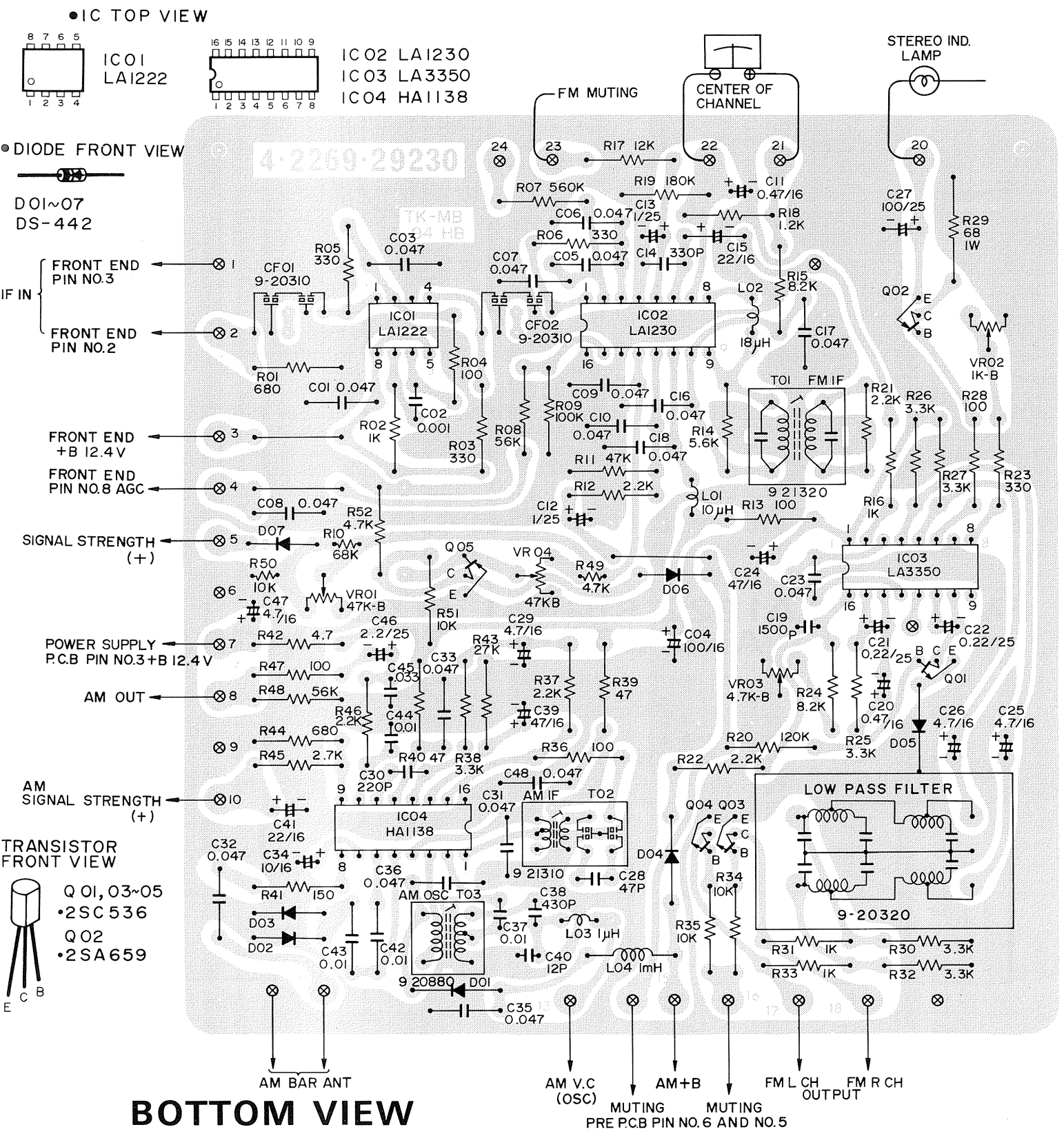
Horizontal Sweep: 500 usec./cm.

SYMMETRICAL TUNING

DIAL CORD STRINGING



AM-FM RF/IF MPX P.C.BOARD



BOTTOM VIEW

	PIN NUMBERS VOLTAGES															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC01 LA1222	1.39V	1.39V		11.5V	12.4V	1.35V	9.7V	12.4V								
IC02 LA1230	2.85V	2.85V	2.85V	0V	0V	5.92V	5.73V	5.75V	5.75V	5.75V	12.1V	3.38V	0.54V	0V	5.13V	0V
IC03 LA3350	10.7V	2.74V	4.71V	8.08V	8.11V	11.6V	0V	0.34V		0.56V	2.08V	2.25V	1.96V	2.09V	2.08V	2.85V
IC04 HA1138	11.7V	2.79V	11.7V	11.7V	4.9V	9.86V	2.0V	0.88V	0.06V	3.8V	4.3V	11.8V	2.76V	2.77V	2.72V	0V

PARTS LIST

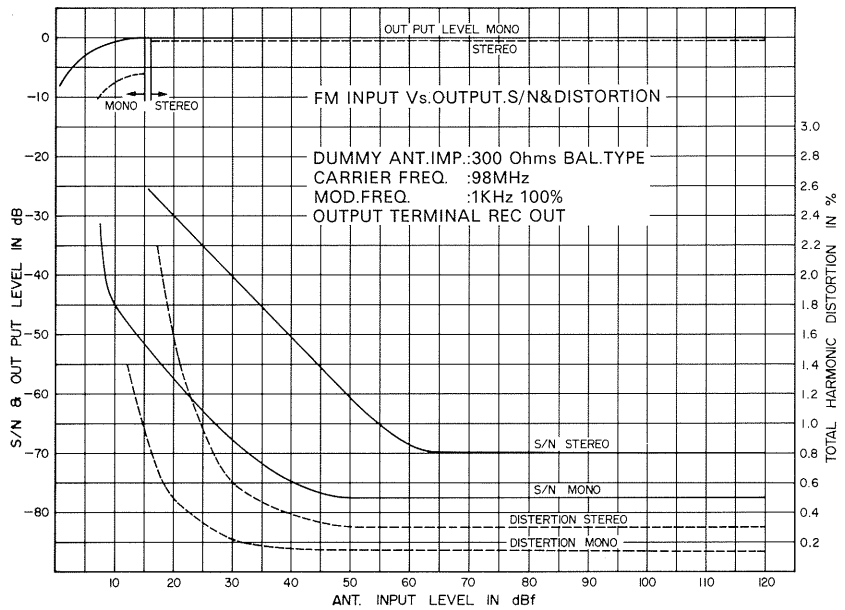
AM FM RF/IF MPX PCB Assy
1310 4001 72700

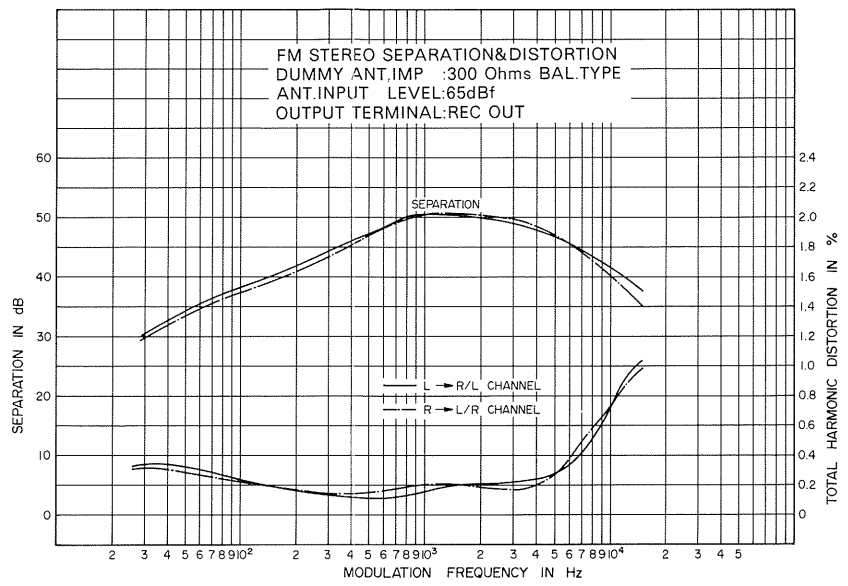
Ref. No.	Part Number	Description
L01	4 2539 20370	Coil 10 μH ±10 %
L02	4 2539 20380	Coil 18 μH ±5 %
L03	4 2539 20310	Coil 1 μH ±5 %
L04	4 2539 20170	Choke Coil 1 mH
T01	4 2569 21320	IF Trans FM
T02	4 2569 21310	IF Trans AM
T03	4 2589 20880	OSC Coil AM
VR01	4 2229 25100	Semi-Fixed VR 47k-B
VR02	4 2229 22910	VR 1k-B
VR03	4 2229 23880	VR 4.7k-B
VR04	4 2229 25100	Semi-Fixed VR 47k-B
	4 2279 20320	Low Pass Filter
	4 2359 23120	Socket 16P
CF01,02	4 2279 20310	Ceramic Filter
	CAPACITORS	
C01	C1HYSZ473A	Ceramic 0.047 μF 50V +80,–20 %
C02	C1HYSZ102A	Ceramic 0.001 μF 50V +80,–20 %
C03	C1HYSZ473A	Ceramic 0.047 μF 50V +80,–20 %
C04	C1CRB-107A	Electrolytic 100 μF 16V
C05,06 07,08 09,10	C1HYDZ473A	Ceramic 0.047 μF 50V +80,–20 %
C11	C1CUEX474A	Alsicon 0.47 μF 16V +40,–20 %
C12,13	C1EUEM105A	Alsicon 1 μF 25V ±20 %
C14	C1HCDK331SL	Ceramic 330pF 50V ±10 %
C15	C1CTRM226A	Tantalum 22 μF 16V ±20 %
C16,17	C1HYDZ473A	Ceramic 0.047 μF 50V +80,–20 %
C18		
C19	C1HSEJ152A	Styrol 1500pF 50V ±5 %
C20	C1CUEX474A	Alsicon 0.47 μF 16V +40,–20 %
C21,22	C1EUEM224A	Alsicon 0.22 μF 25V ±20 %
C23	C1HFRM473A	Mylar 0.047 μF 50V ±20 %
C24	C1CRB-476A	Electrolytic 47 μF 16V
C25,26	C1CUEX475A	Alsicon 4.7 μF 16V +40,–20 %
C27	C1ERB-107A	Electrolytic 100 μF 25V
C28	C1HCSK470SL	Ceramic 47pF 50V ±10 %
C29	C1CRB-475A	Electrolytic 4.7 μF 16V
C30	C1HCDK221SL	Ceramic 220pF 50V ±10 %
C31,32 33	C1HYDZ473A	Ceramic 0.047 μF 50V +80,–20 %
C34	C1CRB-106A	Electrolytic 10 μF 16V
C35,36	C1HYDZ473A	Ceramic 0.047 μF 50V +80,–20 %
C37	C1HFRM103A	Mylar 0.01 μF 50V ±20 %
C38	C1HSEJ431A	Styrol 430pF 50V ±5 %
C39	C1CRB-476A	Electrolytic 47 μF 16V
C40	C1HCDJ120SL	Ceramic 12pF 50V
C41	C1CRB-226A	Electrolytic 22 μF 16V
C42,43	C1HYDZ103A	Ceramic 0.01 μF 50V +80,–20 %
C44	C1HFRM103A	Mylar 0.01 μF 50V ±20 %
C45	C1HFRM333A	Mylar 0.033 μF 50V ±20 %
C46	C1EUEM225A	Alsicon 2.2 μF 25V ±20 %
C47	C1CUEX475A	Alsicon 4.7 μF 16V +40,–20 %
C48	C1HYDZ473A	Ceramic 0.047 μF 50V +80,–20 %

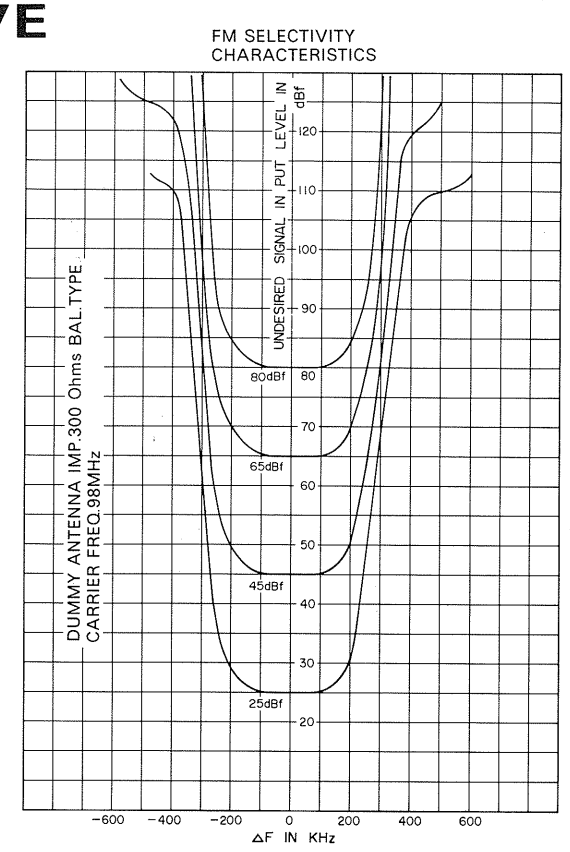
TRANSISTOR DC VOLTAGES				
SYMBOL NO.	DEVICE	B	C	E
Q01	2SC536	1.09V	0.56V	0.56V
Q02	2SA659	5.33V	5.36V	6.12V
Q03,04	2SC536	0V	0V	0V
Q05	2SC536	0.03V	3.78V	0V

Ref. No.	Parts No.	Description
	SEMICONDUCTORS	
D01,02 03,04 05,06 07	2055 9040 44210	Diode DS-442
IC01	2065 0131 22210	IC LA1222
IC02	2065 0151 23010	IC LA 1230
IC03	2065 0743 35019	IC LA-3350SS
IC04	IKK-HA1138	IC HA1138
Q01	2035 5100 53640	TR 2SC536 D or E
Q02	2035 6800 65940	TR 2SA659 D or E
Q03,04 05	2035 5100 53640	TR 2SC536 D or E
	RESISTORS	
R01	R2EDSJ681A	Carbon 680 1/4W ±5 %
R02	R2EDSJ102A	Carbon 1k 1/4W ±5 %
R03	R2EDSJ331A	Carbon 330 1/4W ±5 %
R04	R2EDSJ101A	Carbon 100 1/4W ±5 %
R05,06	R2EDSJ331A	Carbon 330 1/4W ±5 %
R07	R2EDSJ564A	Carbon 560k 1/4W ±5 %
R08	R2EDSJ563A	Carbon 56k 1/4W ±5 %
R09	R2EDSJ104A	Carbon 100k 1/4W ±5 %
R10	R2EDUJ683A	Carbon 68k 1/4W ±5 %
R11	R2EDSJ473A	Carbon 47k 1/4W ±5 %
R12	R2EDSJ222A	Carbon 2.2k 1/4W ±5 %
R13	R2EDSJ101A	Carbon 100 1/4W ±5 %
R14	R2EDSJ562A	Carbon 5.6k 1/4W ±5 %
R15	R2EDSJ822A	Carbon 8.2k 1/4W ±5 %
R16	R2EDSJ102A	Carbon 1k 1/4W ±5 %
R17	R2EDSJ123A	Carbon 12k 1/4W ±5 %
R18	R2EDSJ122A	Carbon 1.2k 1/4W ±5 %
R19	R2EDSJ184A	Carbon 180k 1/4W ±5 %
R20	R2EDSJ124A	Carbon 120k 1/4W ±5 %
R21,22	R2EDSJ222A	Carbon 2.2k 1/4W ±5 %
R23	R2EDSJ331A	Carbon 330 1/4W ±5 %
R24	R2EDSJ822A	Carbon 8.2k 1/4W ±5 %
R25,26 27	R2EDSJ332A	Carbon 3.3k 1/4W ±5 %
R28	R2EDSJ101A	Carbon 100 1/4W ±5 %
R29	R3AXBJ680A	Oxide Metal Film 68 1W ±5 %
R30	R2EDSJ332A	Carbon 3.3k 1/4W ±5 %
R31	R2EDSJ102A	Carbon 1k 1/4W ±5 %
R32	R2EDSJ332A	Carbon 3.3k 1/4W ±5 %
R33	R2EDSJ102A	Carbon 1k 1/4W ±5 %
R34,35	R2EDSJ103A	Carbon 10k 1/4W ±5 %
R36	R2EDSJ101A	Carbon 100 1/4W ±5 %
R37	R2EDSJ222A	Carbon 2.2k 1/4W ±5 %
R38	R2EDSJ332A	Carbon 3.3k 1/4W ±5 %
R39,40	R2EDSJ470A	Carbon 47 1/4W ±5 %
R41	R2EDSJ151A	Carbon 150 1/4W ±5 %
R42	R2EDSJ4R7A	Carbon 4.7 1/4W ±5 %
R43	R2EDSJ273A	Carbon 27k 1/4W ±5 %
R44	R2EDSJ681A	Carbon 680 1/4W ±5 %
R45	R2EDSJ272A	Carbon 2.7k 1/4W ±5 %
R46	R2EDSJ222A	Carbon 2.2k 1/4W ±5 %
R47	R2EDSJ101A	Carbon 100 1/4W ±5 %
R48	R2EDSJ563A	Carbon 56k 1/4W ±5 %
R49	R2EDUJ472A	Carbon 4.7k 1/4W ±5 %
R50	R2EDUJ103A	Carbon 10k 1/4W ±5 %
R51	R2EDSJ103A	Carbon 10k 1/4W ±5 %
R52	R2EDSJ472A	Carbon 4.7k 1/4W ±5 %

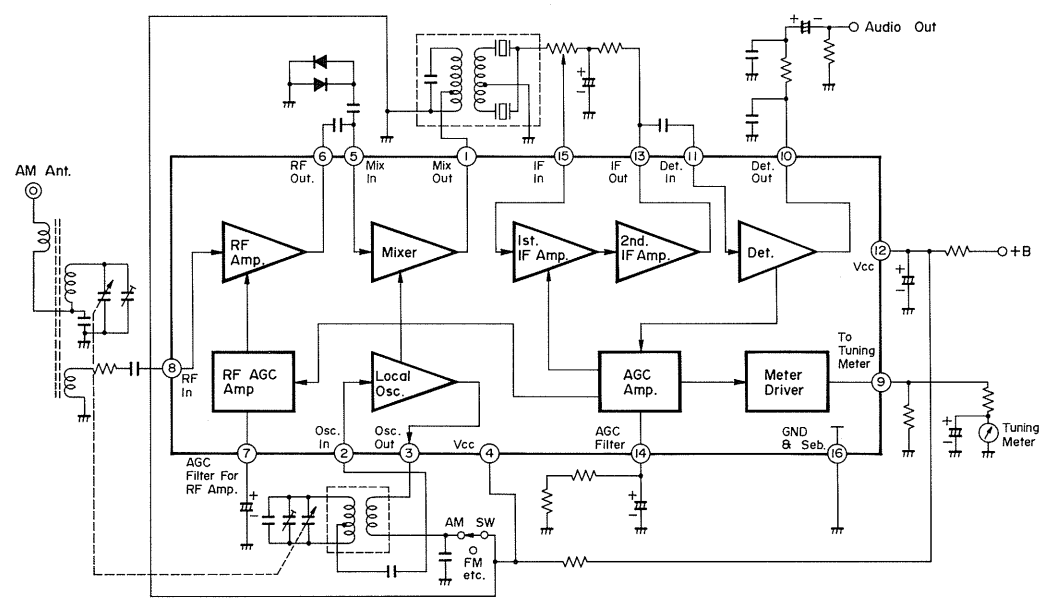
FM TUNER SECTION CHARACTERISTIC CURVE







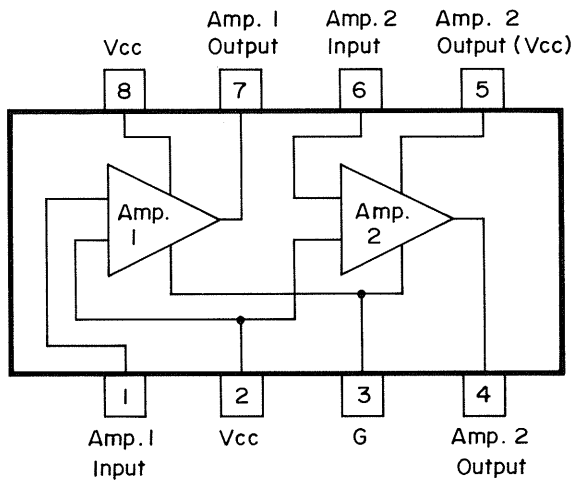
AM RF IF IC HA1138 SIGNAL FLOW

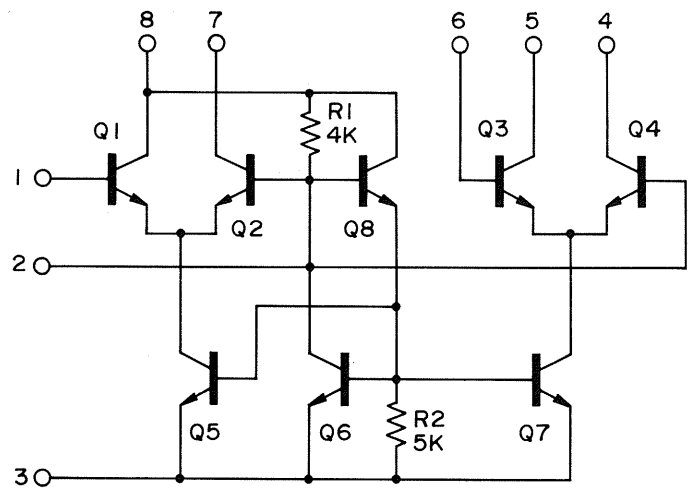


Signal enters R.F. AMP of I.C. where it is amplified.
The converter section consists of a mixer and a local oscillator. The output of the mixer stage contains two frequency components.

The 455 KHz component signal is then fed to the I.F. amplifier. The tuned Frequency of the I.F. filter is 455 KHz. When the I.F. signal appears at the low pass filter, the 455-KHz carrier component is then locked, allowing only its audio component to pass.

FM IF IC LA1222 SIGNAL FLOW AND EQUIVALENT DIAGRAM

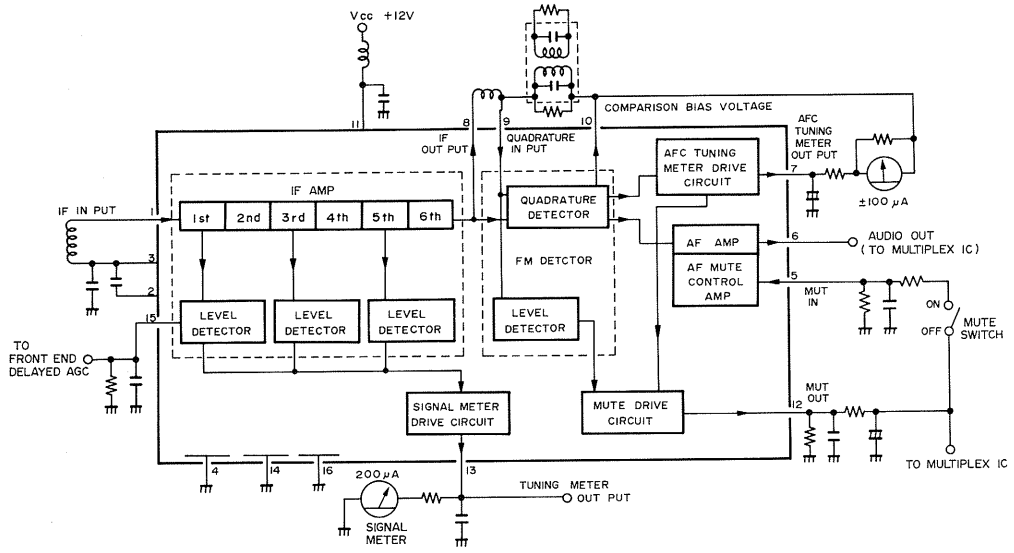




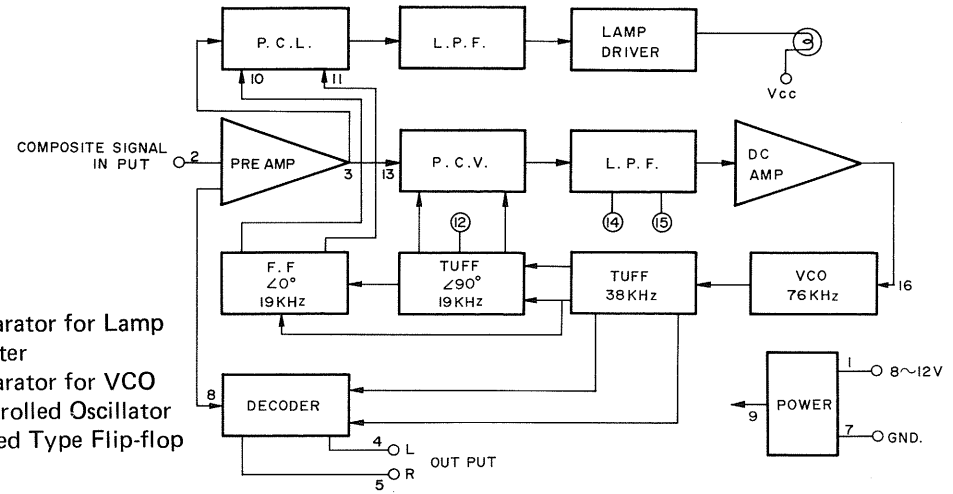
The circuit contains two steps of an independent differential amplification circuit, although the LA1222 is rated to operate on 12-volt power, it can also be used at low voltage, it also permits desired current limitation through insertion of a resistor between pins (2) and (8).

The limiting action by this circuit has current-limiting type limiter characteristics. The advantages that the current-limiting type limiter are: It improves capture ratio against input variation, it does not deviate center frequencis, etc...

FM IF IC LA1230 SIGNAL FLOW



FM MPX IC LA3350 SIGNAL FLOW



P. C. L. : Phase Comparator for Lamp
L. P. F. : Low Pass Filter
P. C. V. : Phase Comparator for VCO
V C O : Voltage controlled Oscillator
TUFF : Direct coupled Type Flip-flop

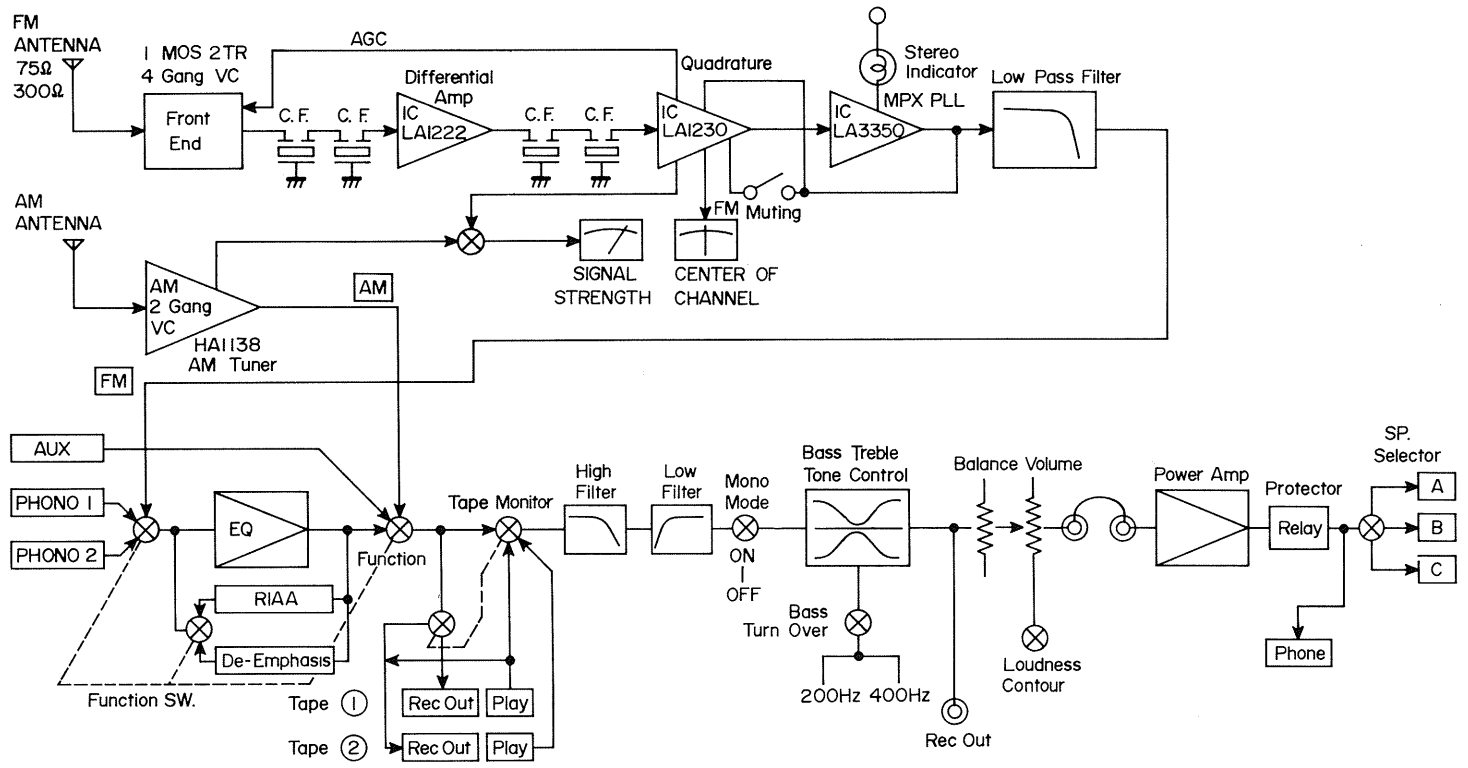
The function of LA3350 is divided into two sections; the PLL section that reproduces the 38 KHz subcarrier, and the decoder section that switches the composite signal. The phase-duty cycle stability of the switching signal reproduced by the PLL determines the separation and the distortion factor of the demodulated signal. The phase comparator detects the phase difference between the VCO oscillator signal and the pilot signal. The detected output is in turn used as the control signal for the VCO.
Since higher harmonics are contained in this phase difference signal, it is necessary that a loop filter be used to eliminate these harmonics. The resulting DC component is applied to the VCO as the control signal. The characteristics of the loop filter practically determines the characteristics of the PLL. Stability of the signal synchronized to the input cannot be obtained unless the VCO itself is stable.

Here, only the demodulator circuit is essential as the FM stereo multiplex demodulator. The other components are the PLL as the 19 KHz selective circuit, and the stereo broadcast indicator circuit. The functions of these components are briefly described below.

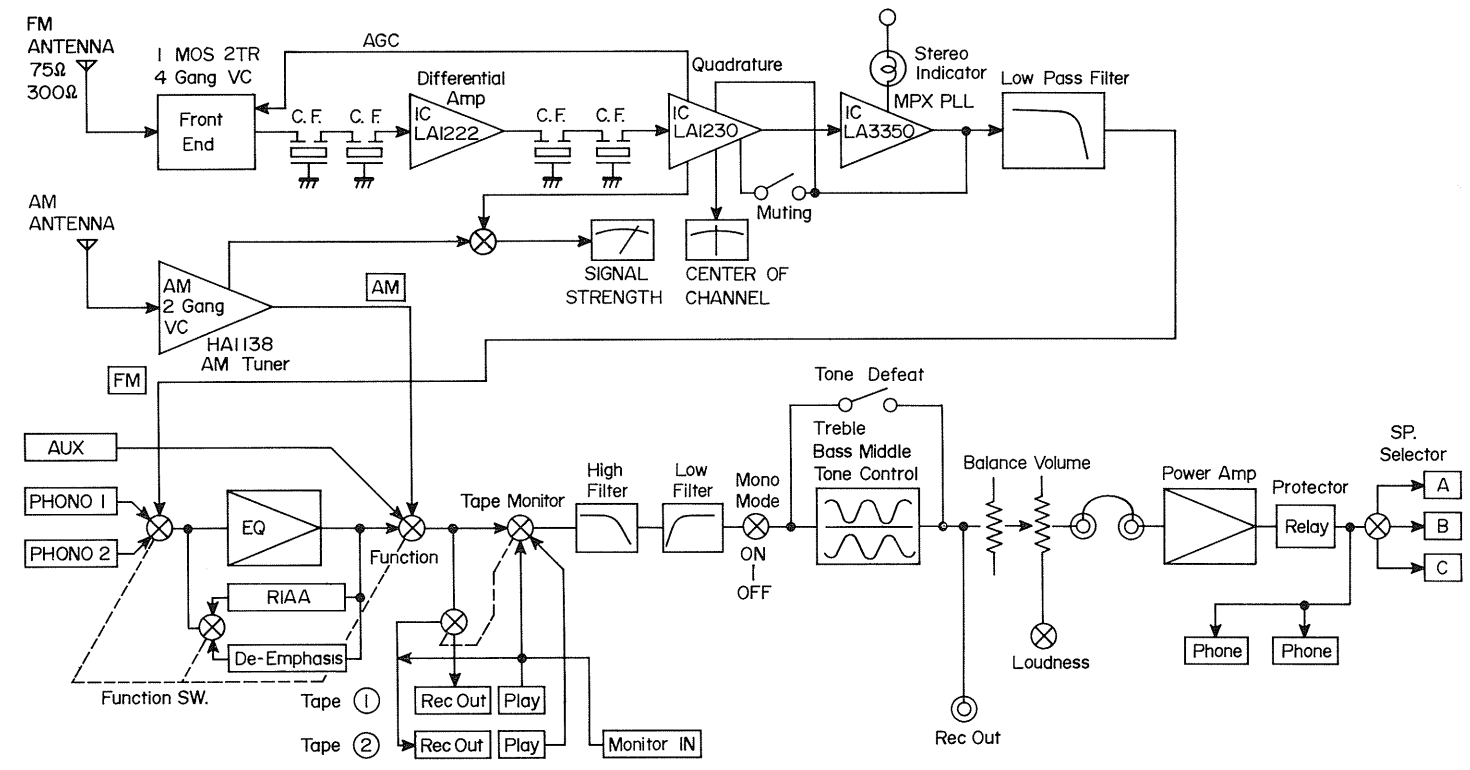
The voltage controlled oscillator generates a saw-tooth wave of 76 KHz, and is frequency-controlled by the output from the DC amplifier. The frequency of the DC amplifier output is reduced to half, or 38 KHz, by means of a direct-coupled flip-flop circuit FF-1. This 38 KHz signal is applied to the demodulator circuit and demodulates the stereo composite signal. The FF-1 output is again reduced to 19 KHz by another direct-coupled flip-flop circuit FF-2.
This FF-2 output is then applied to a phase comparator, PC-1, and its phase is compared with that of the pilot signal contained in the input signal. The output from the FF-3 is 19 KHz and 90 degrees lagging in phase behind that of the FF-2 output. It is then applied to another phase comparator, PC-2, where the 19 KHz component of the input signal is detected and fed to the stereo broadcast indicator circuit ot activate the pilot lamp.

BLOCK DIAGRAM

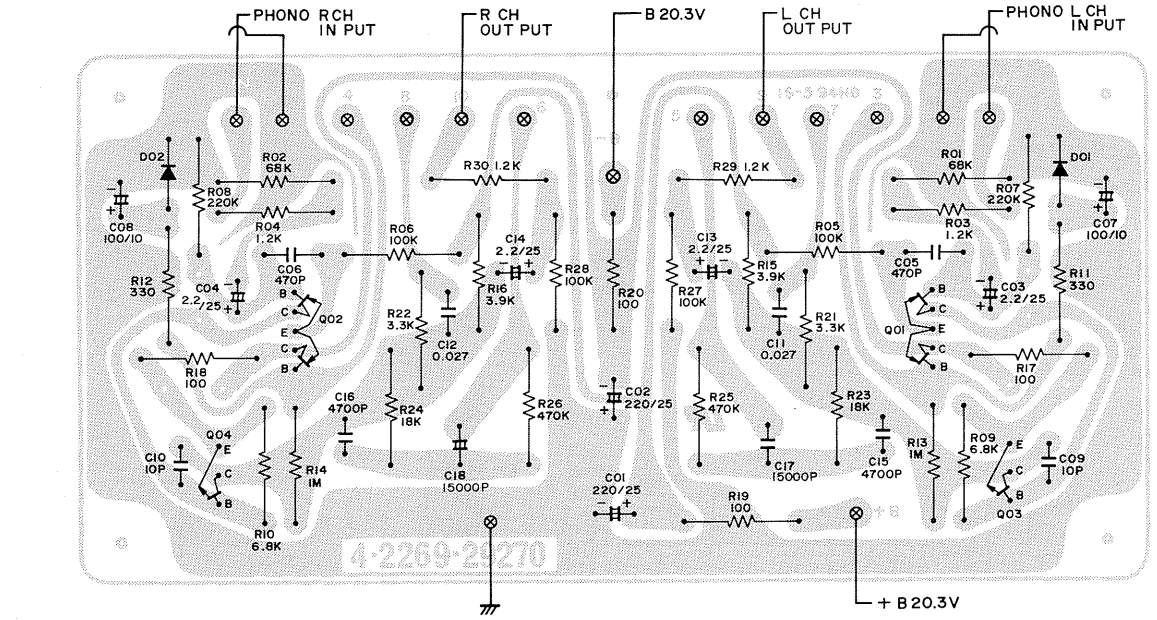
RS-1056



RS-1058



EQ P.C.BOARD



TRANSISTOR FRONT VIEW

•Q 01,02 2SA 798

•Q 03,04 2SC1570

DIODE FRONT VIEW

•D01, 02

DS-442

BOTTOM VIEW

TRANSISTOR DC VOLTAGES						
SYMBOL NO.	DEVICE	B	C	E	C	B
Q01,02	2SA798	0.45V	–18.7V	0.61V	–19.3V	0.05V
Q03,04	2SC1570	–18.7V	–0.04V	–18.8V		

PARTS LIST

EQ PCB Assy
1310 4001 73100

Ref. No.	Part Number	Description		
	CAPACITORS			
C01,02	C1ERE-227A	Electrolytic 220 μF	25V	
C03,04	C1EUEM225A	Alsicon 2.2 μF	25V	±20 %
C05,06	C1HCDK471SL	Ceramic 470pF	50V	±10 %
C07,08	C1ARE-107A	Electrolytic 100 μF	10V	
C09,10	C1HCSD100SL	Ceramic 10pF	50V	±0.5 %
C11,12	C1HFRM273A	Mylar 0.027 μF	50V	±20 %
C13,14	C1EUEM225A	Alsicon 2.2 μF	25V	±20 %
C15,16	C1HSEJ472A	Styrol 4700pF	50V	±5 %
C17,18	C1HSEJ153A	Styrol 15000pF	50V	±5 %
	SEMICONDUCTORS			
D01,02	2055 9040 44210	Diode DS-442		
Q01,02	TMM-2SA798--F	TR 2SA798 F		
Q03,04	2035 5151 57079	TR 2SC1570 LG		

Ref. No.	Part Number	Description		
	RESISTORS			
R01,02	R2EDVJ683A	Carbon 68k	1/4W	±5 %
R03,04	R2EDVJ122A	Carbon 1.2k	1/4W	±5 %
R05,06	R2EDVJ104A	Carbon 100k	1/4W	±5 %
R07,08	R2EDVJ224A	Carbon 220k	1/4W	±5 %
R09,10	R2EDVJ682A	Carbon 6.8k	1/4W	±5 %
R11,12	R2EDVJ331A	Carbon 330	1/4W	±5 %
R13,14	R2EDVJ105A	Carbon 1M	1/4W	±5 %
R15,16	R2EDVJ392A	Carbon 3.9k	1/4W	±5 %
R17,18 19,20	R2EDVJ101A	Carbon 100	1/4W	±5 %
R21,22	R2EDVJ332A	Carbon 3.3k	1/4W	±5 %
R23,24	R2EDVJ183A	Carbon 18k	1/4W	±5 %
R25,26	R2EDVJ474A	Carbon 470k	1/4W	±5 %
R27,28	R2EDVJ104A	Carbon 100k	1/4W	±5 %
R29,30	R2EDVJ122A	Carbon 1.2k	1/4W	±5 %

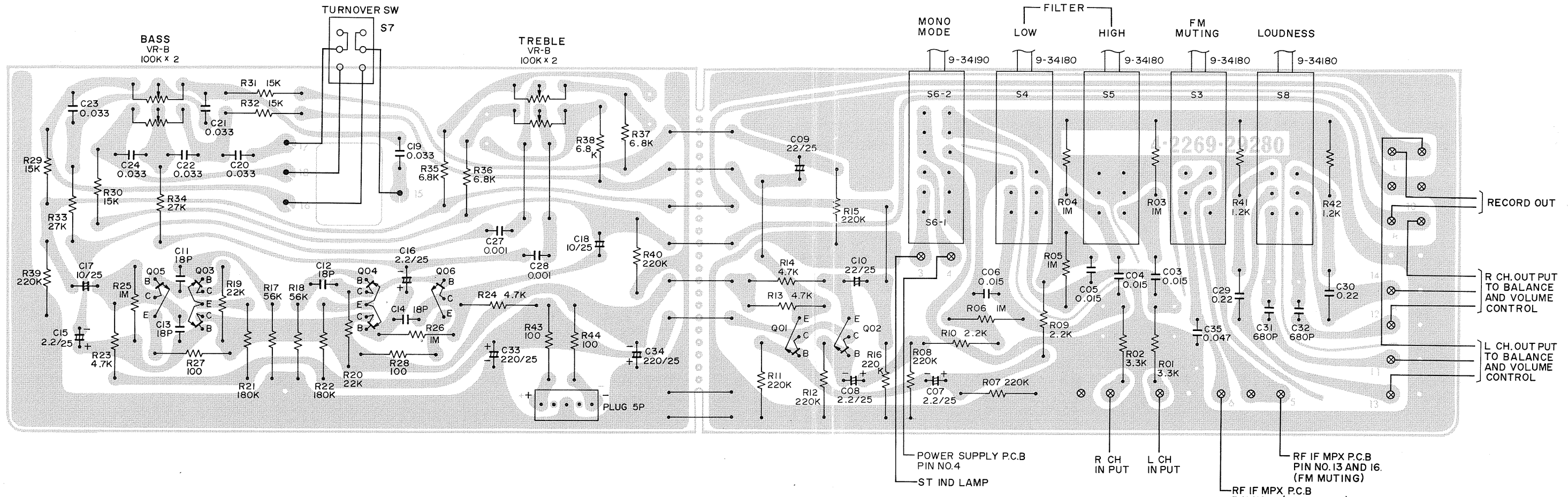
PARTS LIST

PRE TONE PCB Assy
1310 4001 73200 (RS-1056)
1310 4001 74900 (RS-1058)

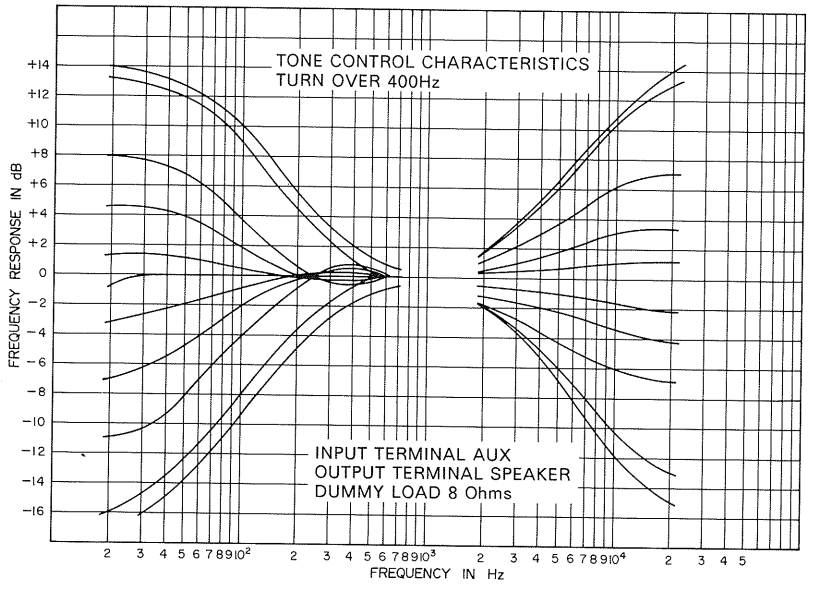
Ref. No.	Part Number	Description		
	4 2229 25480	VR B-100kx2 (RS-1040)		
	4 2229 25390	VR B-100kx2 (RS-1050)		
(RS-1056)				
S03	4 2319 34180	SW Lever FM Muting		
S04	4 2319 34180	SW Lever Low Filter		
S05	4 2319 34180	SW Lever High Filter		
S06	4 2319 34190	SW Lever Mono Mode		
S07	4 2319 34170	SW Lever Turnover		
S08	4 2319 34180	SW Lever Loudness		
(RS-1058)				
S03	4 2319 34180	SW Lever FM Muting		
S04	4 2319 34180	SW Lever Low Filter		
S05	4 2319 34180	SW Lever High Filter		
S06	4 2319 34190	SW Lever Mono Mode		
S07	4 2319 34191	SW Lever Tone Controls		
S08	4 2319 34180	SW Lever Loudness		
	CAPACITORS			
C03,04 05,06	C1HFAK153A	Mylar 0.015 μF	50V	±10 %
C07,08	C1EUEM225A	Alsicon 2.2 μF	25V	±20 %
C09,10	C1EAEN226A	Electrolytic 22 μF	25V	±30 %
C11,12 13,14	C1HCDK180SL	Ceramic 18pF	50V	±10 %
C15,16	C1EUEM225A	Alsicon 2.2 μF	25V	±20 %
C17,18 (RS-1056)	C1EAEN106A	Electrolytic 10 μF	25V	±30 %
C19,20 21,22 23,24	C1HFAJ333A	Mylar 0.033 μF	50V	±5 %
C27,28	C1HFAK102A	Mylar 0.001 μF	50V	±10 %
C29,30	C1HFRK224A	Mylar 0.22 μF	50V	±10 %
C31,32	C1HYDM681R	Titanium 680pF	50V	±20 %
C33,34	C1ERE-227A	Electrolytic 220 μF	25V	
C35 (RS-1058)	C1HYDZ473A	Ceramic 0.047 μF	50V	+80,–20 %
C19,20 21,22	C1HFRK183A	Mylar 0.018 μF	50V	±10 %
C23,24	C1HFRK472A	Mylar 0.0047 μF	50V	±10 %
C27,28	C1HFRK332A	Mylar 0.0033 μF	50V	±10 %
C29,30	C1HFRK682A	Mylar 0.0068 μF	50V	±10 %
C31,32	C1HFRK224A	Mylar 0.22 μF	50V	±10 %
C33,34	C1HYDK681R	Ceramic 680pF	50V	±10 %
C35,36	C1ERE-227A	Electrolytic 220 μF	25V	
C37	C1HYDZ473A	Ceramic 0.047 μF	50V	+80,–20 %

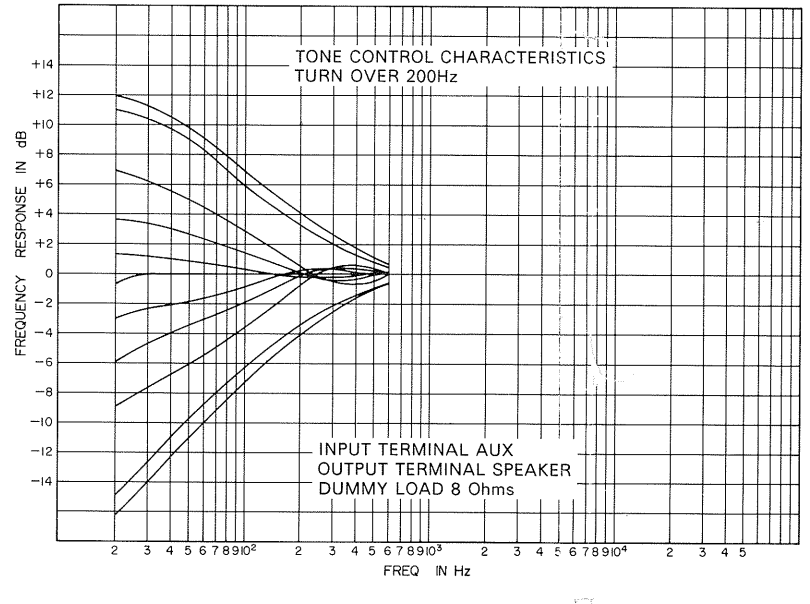
Ref. No.	Part Number	Description		
	SEMICONDUCTORS			
Q01,02 05,06	2035 5151 57079	TR 2SC1570 LG		
Q03,04	TMM-2SA798--F	TR 2SA798 F		
	RESISTORS			
R01,02	R2EDVJ332A	Carbon 3.3k	1/4W	±5 %
R03,04 05,06	R2EDVJ105A	Carbon 1M	1/4W	±5 %
R07,08	R2EDVJ224A	Carbon 220k	1/4W	±5 %
R09,10	R2EDVJ222A	Carbon 2.2k	1/W	±5 %
R11,12	R2EDVJ224A	Carbon 220k	1/4W	±5 %
R13,14	R2EDVJ472A	Carbon 4.7k	1/4W	±5 %
R15,16	R2EDVJ224A	Carbon 220k	1/4W	±5 %
R17,18	R2EDVJ563A	Carbon 56k	1/4W	±5 %
R19,20	R2EDVJ223A	Carbon 22k	1/4W	±5 %
R21,22	R2EDVJ184A	Carbon 180k	1/4W	±5 %
R23,24	R2EDVJ472A	Carbon 4.7k	1/4W	±5 %
R25,26	R2EDVJ105A	Carbon 1M	1/4W	±5 %
R27,28	R2EDVJ101A	Carbon 100	1/4W	±5 %
R29,30 31,32	R2EDVJ153A	Carbon 15k	1/4W	±5 %
R33,34 (RS-1056)	R2EDVJ273A	Carbon 27k	1/4W	±5 %
R35,36 37,38	R2EDVJ682A	Carbon 6.8k	1/4W	±5 %
R39,40	R2EDVJ224A	Carbon 220k	1/4W	±5 %
R41,42	R2EDVJ122A	Carbon 1.2k	1/4W	±5 %
R43,44 (RS-1058)	R2EDVJ101A	Carbon 100	1/4W	±5 %
R35,36 37,38 39,40	R2EDVJ562A	Carbon 5.6k	1/4W	±5 %
R41,42 43,44	R2EDVJ682A	Carbon 6.8k	1/4W	±5 %
R45,46	R2EDVJ224A	Carbon 220k	1/4W	±5 %
R47,48	R2EDVJ122A	Carbon 1.2k	1/4W	±5 %
R49,50	R2EDVJ101A	Carbon 100	1/4W	±5 %

TONE CONTROL AND MODE SELECTOR P.C.BOARD



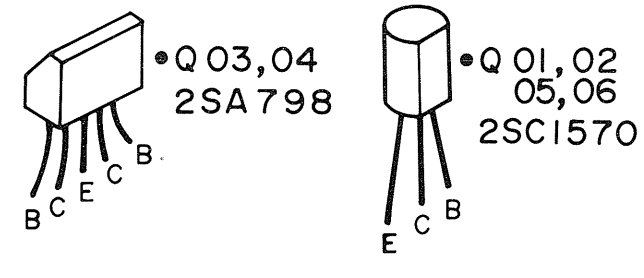
CHARACTERISTIC CURVE



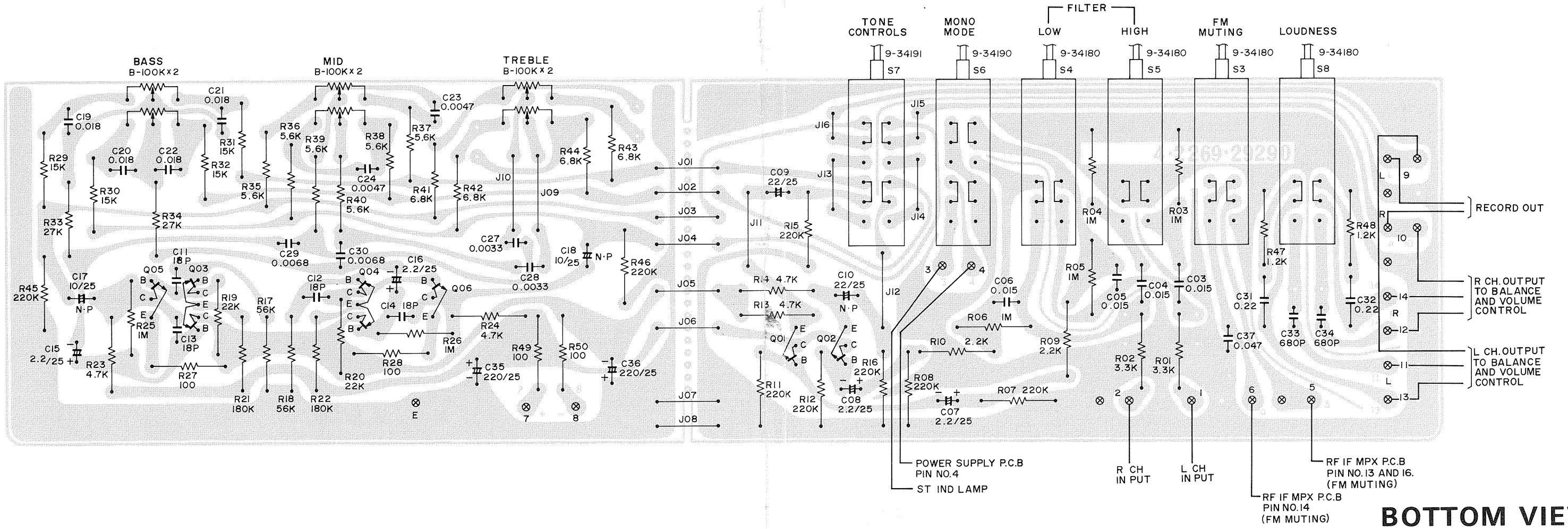


TRANSISTOR DC VOLTAGES						
SYMBOL NO.	DEVICE	B	C	E	C	B
Q01,02	2SC1570	−1.55V	19.6V	−22V		
Q03,04	2SA798	0.09V	−17.9V	0.07V	−18.9V	0.015V
Q05,06	2SC1570	−17.9V	−0.1V	−18.4V		

TRANSISTOR FRONT VIEW

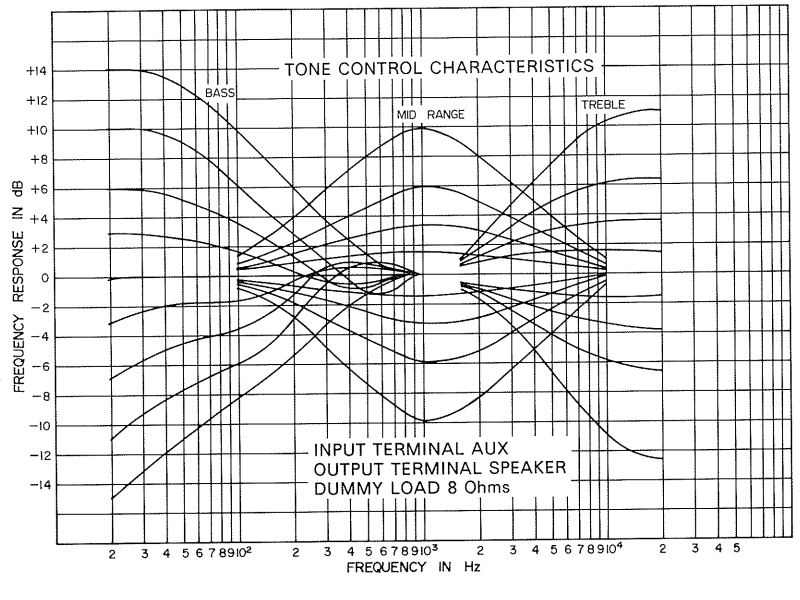


TONE CONTROL AND MODE SELECTOR P.C.BOARD



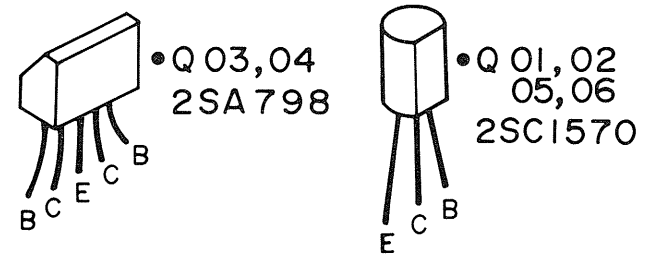
BOTTOM VIEW

CHARACTERISTIC CURVE

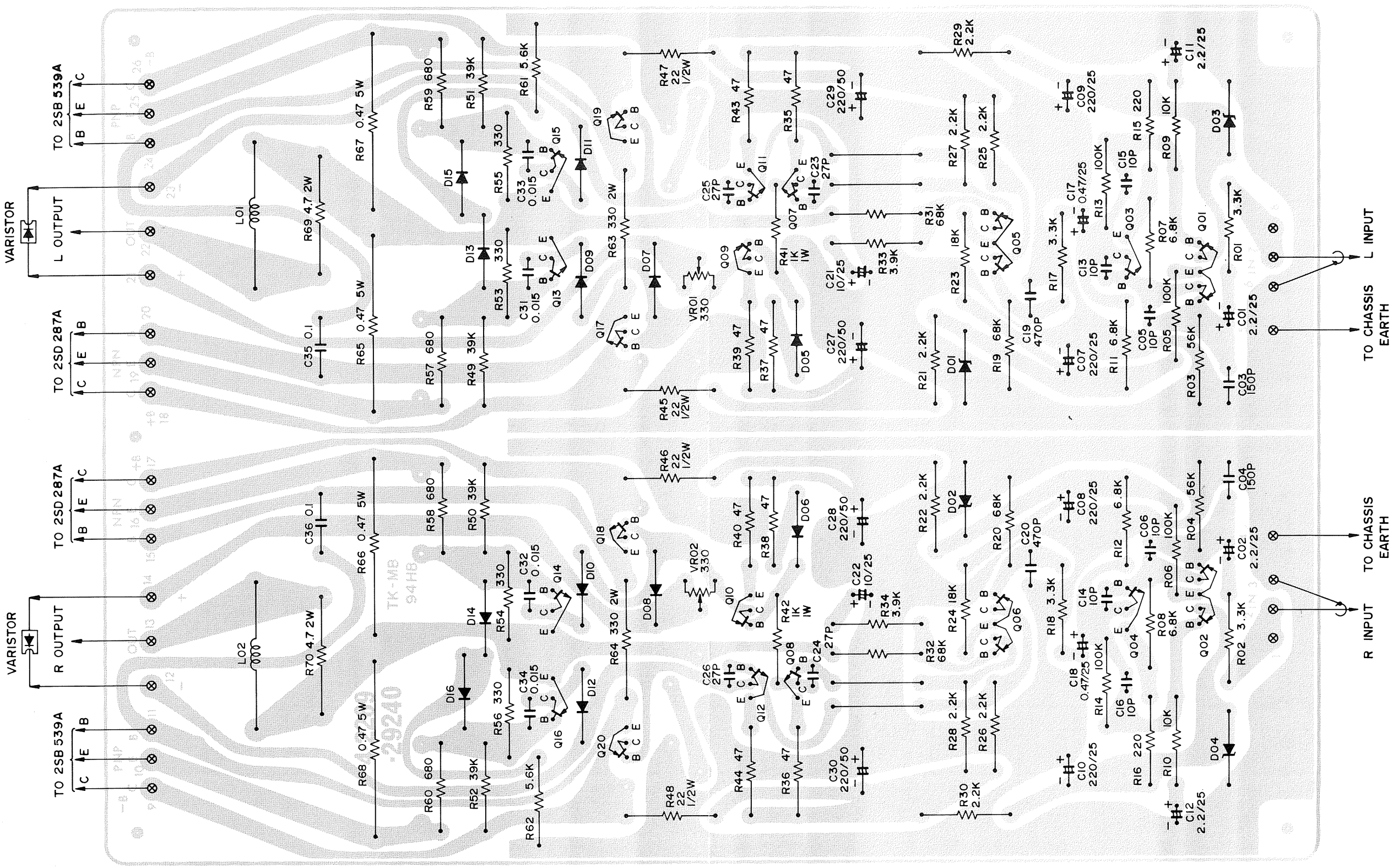


TRANSISTOR DC VOLTAGES						
SYMBOL NO.	DEVICE	B	C	E	C	B
Q01,02	2SC1570	−1.55V	19.6V	−22V		
Q03,04	2SA798	0.09V	−17.9V	0.07V	−18.9V	0.015V
Q05,06	2SC1570	−17.9V	−0.1V	−18.4V		

TRANSISTOR FRONT VIEW

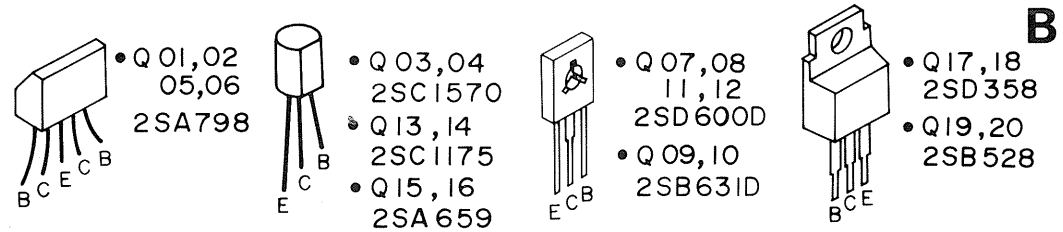


POWER AMP P.C.BOARD



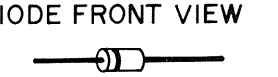
TRANSISTOR DC VOLTAGES											
SYMBOL NO.	DEVICE	B	C	E	C	B	SYMBOL NO.	DEVICE	B	C	E
Q01,02	2SA798	0.077V	−19.9V	0.58V	−21.2V	0.13V	Q11,12	2SD600	−42.3V	−1.14V	−0.94V
Q03,04	2SC1570	−19.9V	−0.04V	−20.5V			Q13,14	2SC1175	0.222V	0.95V	
Q05,06	2SA798	0.068V	−42.7V	0.65V	−42.7V	0.067V	Q15,16	2SA659	−0.247V	−1.17V	−0.94V
Q07,08	2SD600	−42.9V	−30.6V		−43.3V		Q17,18	2SD358	1.16V	44.5V	0.57V
Q09,10	2SB631	42.4V	1.16V	42.9V			Q19,20	2SB528	−1.14V	−44.5V	−0.6V

TRANSISTOR FRONT VIEW



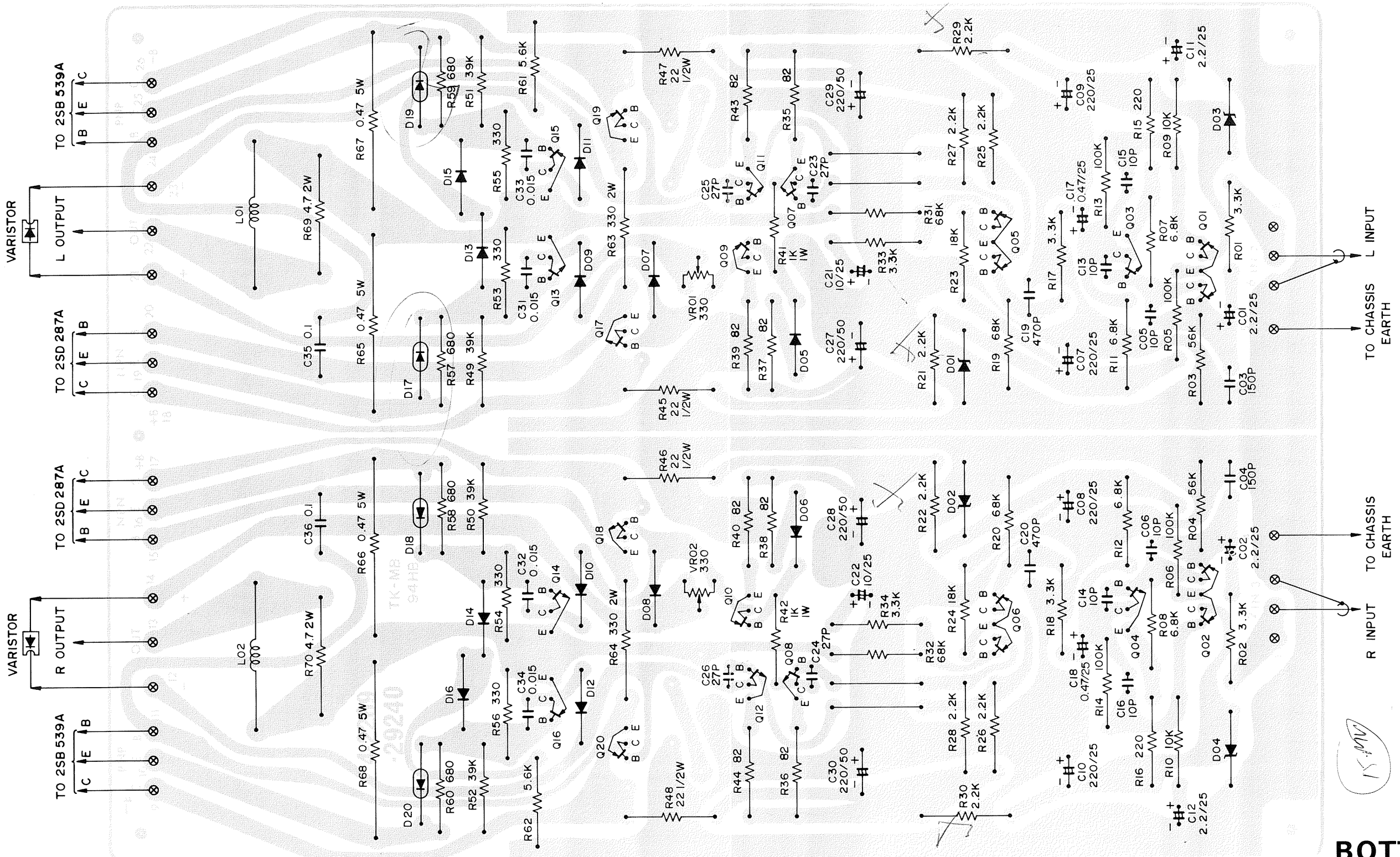
BOTTOM VIEW

DIODE FRONT VIEW



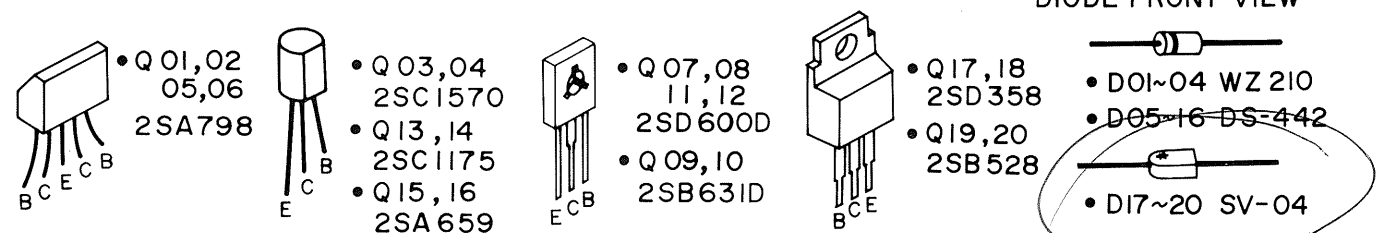
• D01~04 WZ 210
• D05~16 DS-442

POWER AMP P.C.BOARD



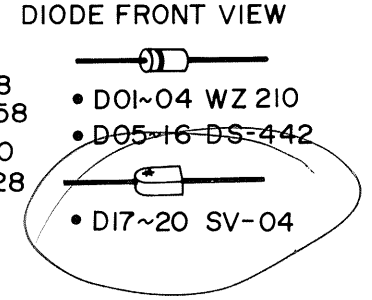
TRANSISTOR DC VOLTAGES											
SYMBOL NO.	DEVICE	B	C	E	C	B	SYMBOL NO.	DEVICE	B	C	E
Q01,02	2SA798	0.012V	–19.4V	0.59V	–20.9V	0.01V	Q11,12	2SD600	–51.2V	–1.21V	
Q03,04	2SC1570	–19.4V	–0.03V	–20.6V			Q13,14	2SC1175	0.292V	0.95V	–0.94V
Q05,06	2SA798	0.069V	–42.5V	0.688V	–42.5V	0.075V	Q15,16	2SA659	–0.292V	–0.78V	–0.94V
Q07,08	2SD600	–51.7V	–31.9V	–52.1V			Q17,18	2SD358	1.18V	53.9V	0.2V
Q09,10	2SB631	52.1V	1.18V	43.3V			Q19,20	2SB528	–1.21V	–53.9V	–0.6V

TRANSISTOR FRONT VIEW



BOTTOM VIEW

DIODE FRONT VIEW



PARTS LIST

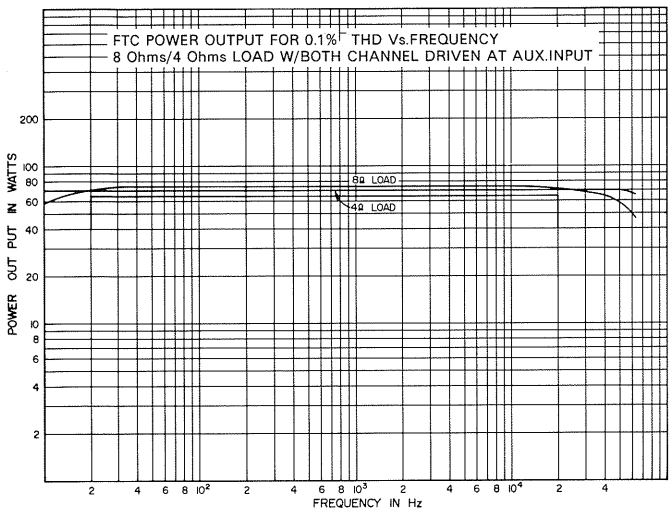
POWER AMP PCB Assy
1310 4001 72802 (RS-1056)
1310 4001 72803 (RS-1058)

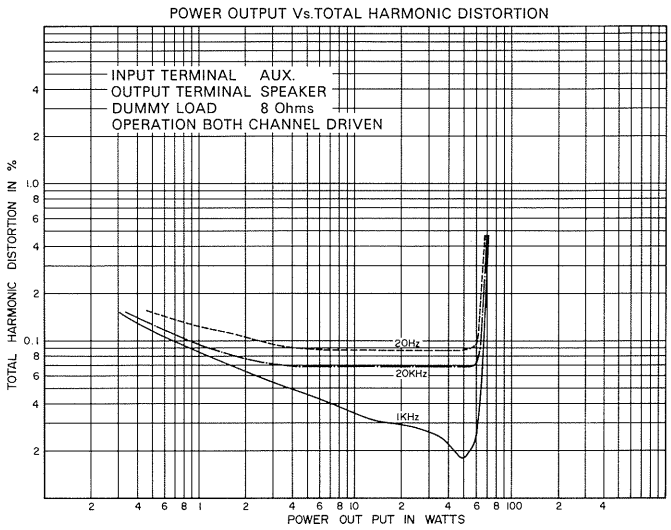
Ref. No.	Part Number	Description
L01,02	4 2539 20281	Coil 2 μH
VR01,02	4 2229 25500	VR B-330x1
	CAPACITORS	
C01,02	C1EUEM 225A	Alsicon 2.2 μF 25V ±20 %
C03,04	C1HCDK151SL	Ceramic 150pF 50V ±10 %
C05,06	C1HCDD100SL	Ceramic 10pF 50V ±0.5 %
C07,08 09,10	C1ERB-227A	Electrolytic 220 μF 25V
C11,12	C1EUEM225A	Alsicon 2.2 μF 25V ±20 %
C13,14 15,16	C1HCDD100SL	Ceramic 10pF 50V ±0.5 %
C17,18	C1EUEM474A	Alsicon 0.47 μF 25V ±20 %
C19,20	C1HCDK471SL	Ceramic 470pF 50V ±10 %
C21,22	C1ERB-106A	Electrolytic 10 μF 25V
C23,24 25,26	C1HCDK270SL	Ceramic 27pF 50V ±10 %
C27,28 29,30	C1HRB-227A	Electrolytic 220 μF 50V
C31,32 33,34	C1HFRM153A	Mylar 0.015 μF 50V ±20 %
C35,36	C1HFRM104A	Mylar 0.1 μF 50V ±20 %
	SEMICONDUCTORS	
D01,02 03,04	DJJ-WZ-210	Diode WZ-210
D05,06 07,08 09.10 11,12 13,14 15,16	2055 9040 44210	Diode DS-442
Q01,02	TMM-2SA798--F	TR 2SA798 F
Q03,04	2035 5151 57079	TR 2SA1570 LG
Q05,06	TMM-2SA798--F	TR 2SA798 F
Q07,08	2035 4900 60040	TR 2SD600D
Q09,10	2035 4910 63140	TR 2SB631D
Q11,12	2035 4900 60040	TR 2SD600D
Q13,14	2035 6701 17550	TR 2SC1175 E
Q15,16	2035 6800 65950	TR 2SA659 E
Q17,18	TMM-2SD358--D	TR 2SD358 D
Q19,20	TMM-2SB528--D	TR 2SB528 D

Ref. No.	Part Number	Description
	RESISTORS	
R01,02	R2EDVJ332A	Carbon 3.3k 1/4W ±5 %
R03,04	R2EDVJ563A	Carbon 56k 1/4W ±5 %
R05,06	R2EDVJ104A	Carbon 100k 1/4W ±5 %
R07,08	R2EDVJ682A	Carbon 6.8k 1/4W ±5 %
R09,10	R2EDVJ103A	Carbon 10k 1/4W ±5 %
R11,12	R2EDVJ682A	Carbon 6.8k 1/4W ±5 %
R13,14	R2EDVJ104A	Carbon 100k 1/4W ±5 %
R15,16	R2EDVJ221A	Carbon 220 1/4W ±5 %
R17,18	R2EDVJ332A	Carbon 3.3k 1/4W ±5 %
R19,20	R2EDVJ683A	Carbon 68k 1/4W ±5 %
R21,22	R2EDVJ222A	Carbon 2.2k 1/4W ±5 %
R23,24	R2EDVJ183A	Carbon 18k 1/4W ±5 %
R25,26 27,28 29,30	R2EDVJ222A	Carbon 2.2k 1/4W ±5 %
R31,32	R2EDVJ683A	Carbon 68k 1/4W ±5 %
R33,34	R2EDVJ392A	Carbon 3.9k 1/4W ±5 % (RS-1056)
R33,34	R2EDVJ332A	Carbon 3.3k 1/4W ±5 % (RS-1058)
R35,36 37,38 39,40	R2EDVJ470A	Carbon 47 1/4W ±5 % (RS-1056)
R35,36 37,38 39,40	R2EDVJ820A	Carbon 82 1/4W ±5 % (RS-1058)
R41,42	R3AXBJ102A	Oxide Metal Film 1k 1W ±5 %
R43,44	R2EDVJ470A	Carbon 47 1/4W ±5 % (RS-1056)
R43,44	R2EDVJ820A	Carbon 82 1/4W ±5 % (RS-1058)
R45,46 47,48	R2HZPK220A	Fuse 22 1/2W ±10 %
R49,50 51,52	R2EDVJ393A	Carbon 39k 1/4W ±5 %
R53,54 55,56	R2EDVJ331A	Carbon 330 1/4W ±5 %
R57,58 59,60	R2EDVJ681A	Carbon 680 1/4W ±5 %
R61,62	R2EDVJ562A	Carbon 5.6k 1/4W ±5 %
R63,64	R3DXBJ331A	Oxide Metal Film 330 2W ±5 %
R65,66 67,68	R3HEPKR47A	Cement 0.47 5W ±10 %
R69,70	R3DXBJ4R7A	Oxide Metal Film 4.7 2W ±5 %

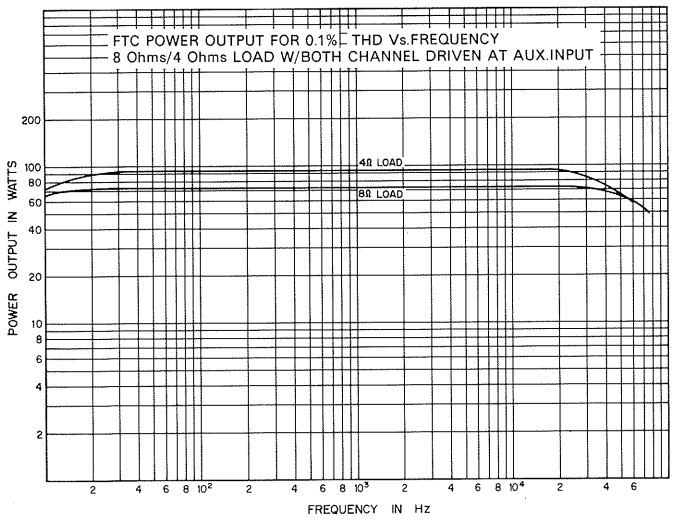
POWER AMPSECTION CHARACTERISTIC CURVE

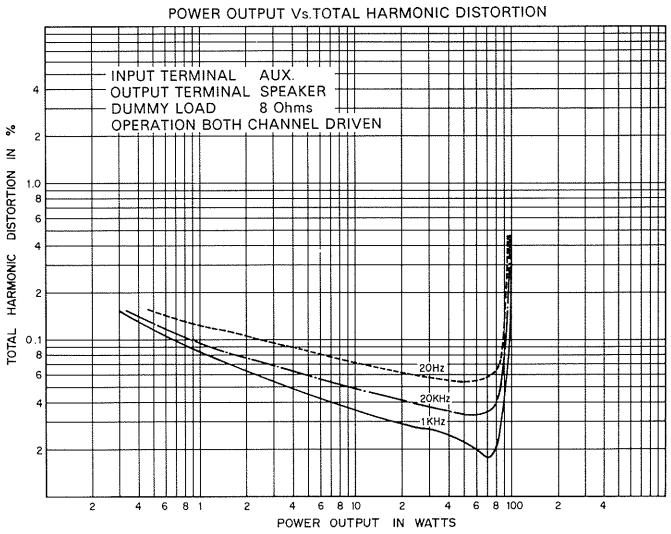
RS-1056


FTC POWER OUTPUT FOR 0.1% THD Vs.FREQUENCY
8 Ohms/4 Ohms LOAD W/BOTH CHANNEL DRIVEN AT AUX.INPUT
8Ω LOAD
4Ω LOAD
POWER OUT PUT IN WATTS
FREQUENCY IN Hz

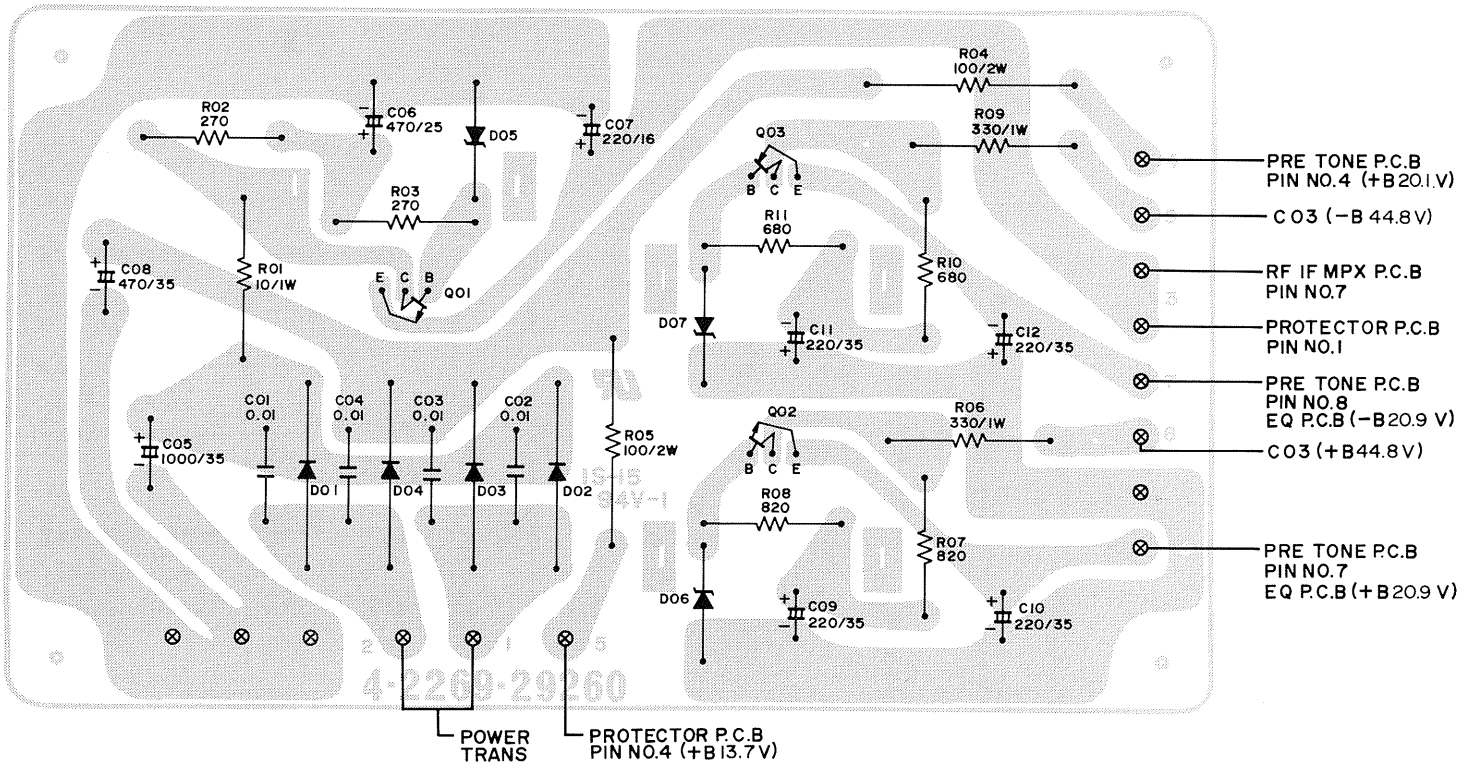


RS-1058


FTC POWER OUTPUT FOR 0.1% THD Vs.FREQUENCY
8 Ohms/4 Ohms LOAD W/BOTH CHANNEL DRIVEN AT AUX.INPUT
4Ω LOAD
8Ω LOAD
POWER OUTPUT IN WATTS
FREQUENCY IN Hz



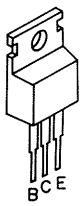
POWER SUPPLY P.C.BOARD



TRANSISTOR DC VOLTAGES				
SYMBOL NO.	DEVICE	B	C	E
Q01	2SD330	13.0V	20.0V	12.41V
Q02	2SD330	21.9V	33.8V	20.9V
Q03	2SB514	21.3V	−33.7V	−20.9V

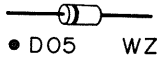
BOTTOM VIEW

TRANSISTOR FRONT VIEW



- Q 01,02 2SD330
- Q03 2SB514

DIODE FRONT VIEW



- D05 WZ 130
- D06,07 WZ 210

- D01~04 DS 130

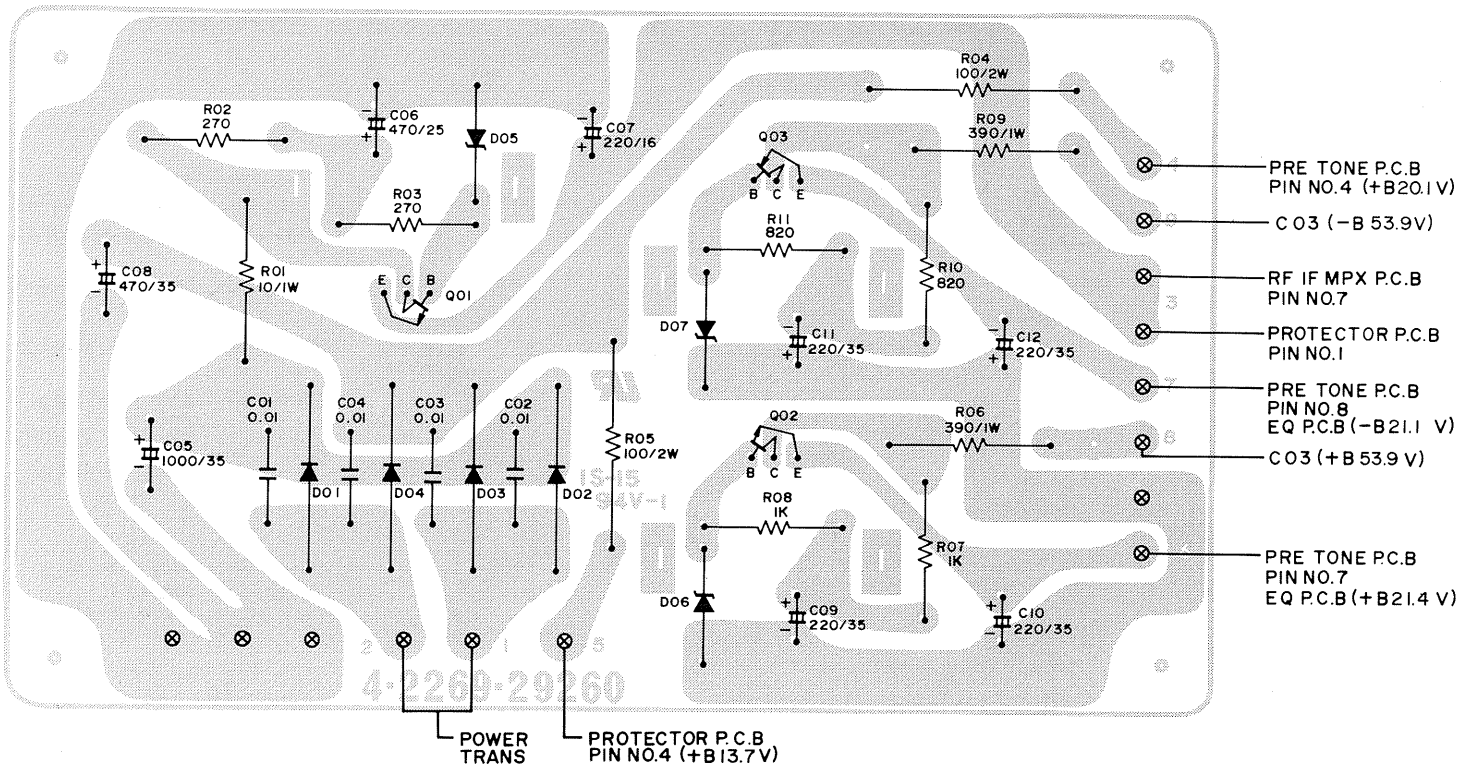
PARTS LIST

POWER SUPPLY PCB Assy
1310 4001 73001 (RS-1056)

Ref. No.	Part Number	Description
	CAPACITORS	
C01,02 03,04	C2HYDP103A	Ceramic 0.01 μF 500V +100,−0 %
C05	C1VRE-108A	Electrolytic 1000 μF 35V
C06	C1ERE-477A	Electrolytic 470 μF 25V
C07	C1CRE-227A	Electrolytic 220 μF 16V
C08	C1VRE-477A	Electrolytic 470 μF 35V
C09,10 11,12	C1VRE-227A	Electrolytic 220 μF 35V
	SEMICONDUCTORS	
D01,02 03,04	2025 2310 13020	Diode DS130YD
D05	DJJ-WZ-130	Diode WZ-130
D06,07	DJJ-WZ-210	Diode WZ-210
Q01,02	2035 8220 33050	TR 2SD330 E
Q03	2035 6460 51440	TR 2SB514 D

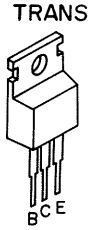
Ref. No.	Part Number	Description
	RESISTORS	
R01	R3AXBJ100A	Oxide Metal Film 10 1W ±5 %
R02,03	R2EDVJ271A	Carbon 270 1/4W ±5 %
R04,05	R3DXBJ101A	Oxide Metal Film 100 2W ±5 %
R06,09	R3AXBJ331A	Oxide Metal Film 330 1W ±5 %
R07,08 10,11	R2EDVJ821A	Carbon 820 1/4W ±5 %

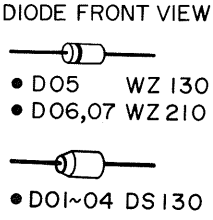
POWER SUPPLY P.C.BOARD



TRANSISTOR DC VOLTAGES				
SYMBOL NO.	DEVICE	B	C	E
Q01	2SD330	13.0V	18.9V	12.41
Q02	2SD330	22.0V	39.7V	21.4V
Q03	2SB514	−21.7V	−39.9V	−21.1V

BOTTOM VIEW





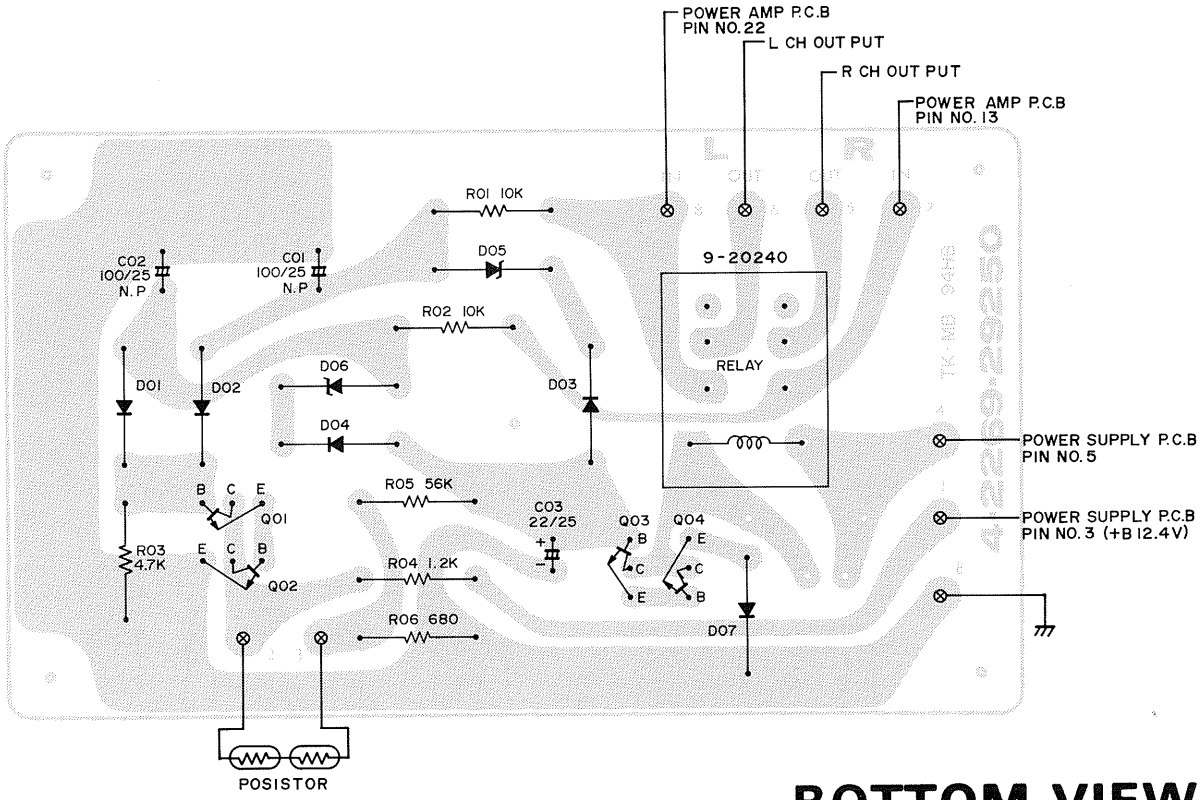
PARTS LIST

POWER SUPPLY PCB Assy
1310 4001 73002 (RS-1058)

Ref. No.	Part Number	Description
	CAPACITORS	
C01,02 03,04	C2HYDP103A	Ceramic 0.01 μF 500V +100,−0 %
C05	C1VRE-108A	Electrolytic 1000 μF 35V
C06	C1ERE-477A	Electrolytic 470 μF 25V
C07	C1CRE-227A	Electrolytic 220 μF 16V
C08	C1VRE-477A	Electrolytic 470 μF 35V
C09,10 11,12	C1VRE-227A	Electrolytic 220 μF 35V
	SEMICONDUCTORS	
D01,02 03,04	2025 2310 13020	Diode DS130YD
D05	DJJ-WZ-130	Diode WZ-130
D06,07	DJJ-WZ-210	Diode WZ-210
Q01,02	2035 8220 33050	TR 2SD330E
Q03	2035 6460 51440	TR 2SB514 D

Ref. No.	Part Number	Description
	RESISTORS	
R01	R3AXBJ100A	Oxide Metal Film 10 1W ± 5 %
R02,03	R2EDVJ271A	Carbon 270 1/4W ± 5 %
R04,05	R3DXBJ101A	Oxide Metal Film 100 2W ± 5 %
R06,09	R3AXBJ391A	Oxide Metal Film 390 1W ± 5 %
R07,08 10,11	R2EDVJ102A	Carbon 1k 1/4W ± 5 %

PROTECTOR P.C.BOARD



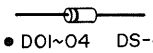
BOTTOM VIEW

TRANSISTOR DC VOLTAGES				
SYMBOL NO.	DEVICE	B	C	E
Q01	2SC536	0.02V	5.55V	0.045V
Q02	2SC536	0.045V	5.55V	0V
Q03	2SC536	2.16V	1.62V	1.5V
Q04	2SC1175	1.5V	1.62V	0.74V

TRANSISTOR FRONT VIEW

● Q01 ~ 03 2SC536
● Q04 2SC1175

DIODE FRONT VIEW



● D01~04 DS-442
● D05,06 RD-6.2E

● D07 DS-130

PARTS LIST

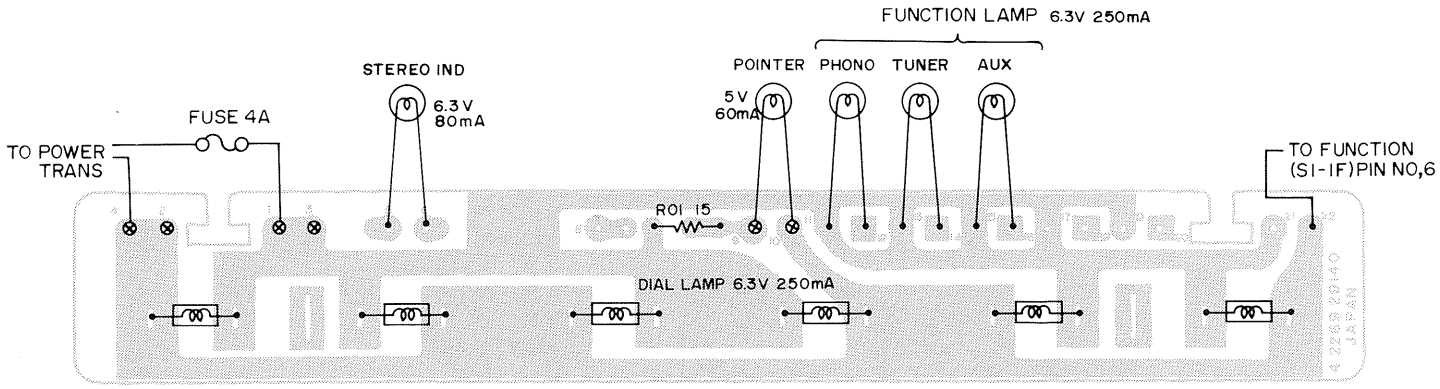
PROTECTOR PCB Assy
1310 4001 72900

Ref. No.	Part Number	Description
	4 2329 20240	Relay
	CAPACITORS	
C01,02	C1EAEN107A	Electrolytic 100 μF 25V ±30 %
C03	C1ERE-226A	Electrolytic 22 μF 25V
	SEMICONDUCTORS	
D01,02 03,04	2055 9040 44210	Diode DS-442
D05,06	DNN-RD6.2E	Diode RD-6.2 E
D07	2025 2310 13020	Diode DS130 YD
Q01,02 03	2035 5100 53650	TR 2SC536 E
Q04	2035 6701 17550	TR 2SC1175 E

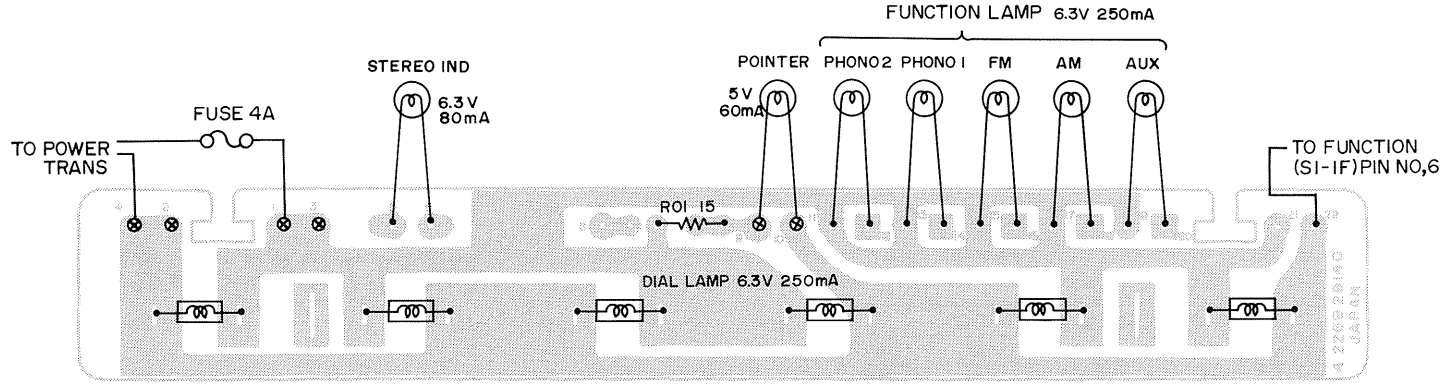
Ref. No.	Part Number	Description	
	RESISTORS		
R01,02	R2EDVJ103A	Carbon 10k	1/4W ±5 %
R03	R2EDVJ472A	Carbon 4.7k	1/4W ±5 %
R04	R2EDVJ122A	Carbon 1.2k	1/4W ±5 %
R05	R2EDVJ563A	Carbon 56k	1/4W ±5 %
R06	R2EDVJ681A	Carbon 680	1/4W ±5 %

DIAL LAMP P.C.BOARD

RS-1056



RS-1058



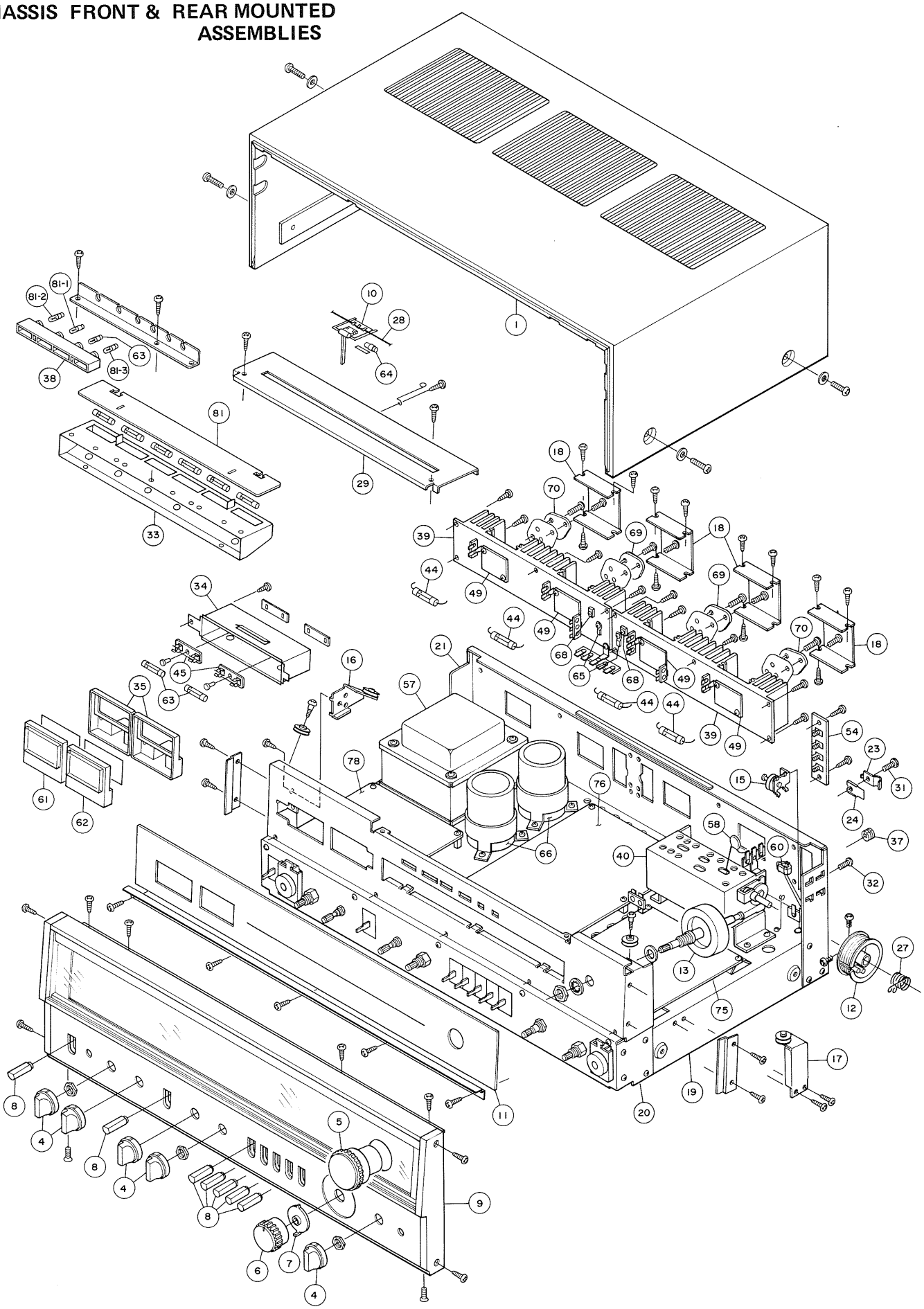
BOTTOM VIEW

PARTS LIST

DIAL LAMP PCB Assy
1310 4001 72162 (RS-1056)
1310 4001 72163 (RS-1058)

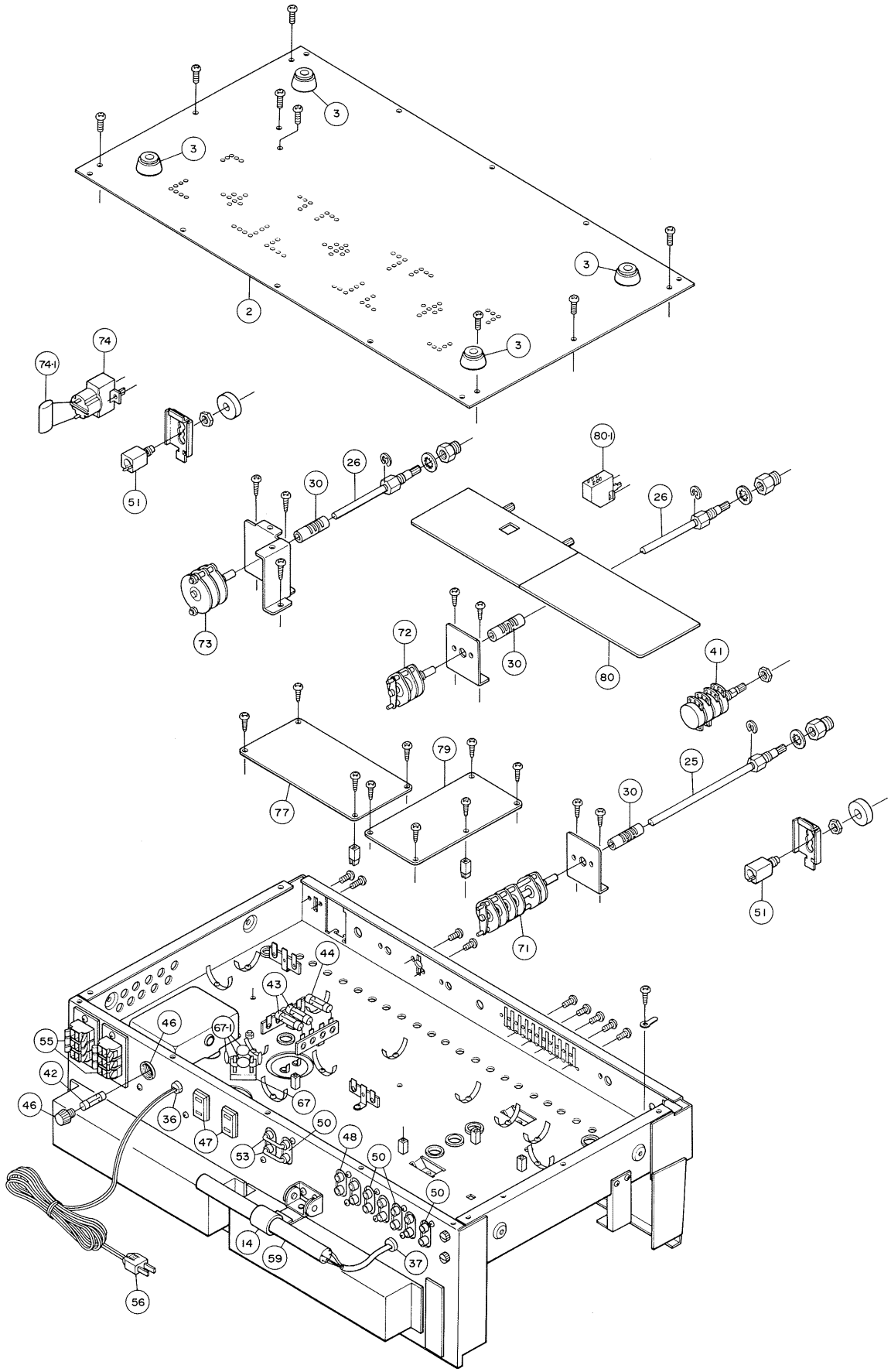
Ref. No.	Part Number	Description
	4 2359 20930	Lamp Holder
63	4 6129 20219	Small Lamp IND 6.3V 80mA
	4 6129 20280	Pilot Lamp 6.3V 250mA (Dial Lamp) (Function Lamps)
81-1	4 6129 20430	Pilot Lamp 6.3V 80mA
81-2	4 6129 20431	Pilot Lamp 6.3V 80mA
81-3	4 6129 20432	Pilot Lamp 6.3V 80mA
81-4	4 6129 20216	Pilot Lamp 6.3V 80mA (RS-1058)
81-5	4 6129 20433	Pilot Lamp 6.3V 80mA (RS-1058)
	RESISTORS	
R01	R2EDSJ150A	Carbon 15 1/4W ±5 %

EXPLODED VIEW OF CABINET AND CHASSIS FRONT & REAR MOUNTED ASSEMBLIES

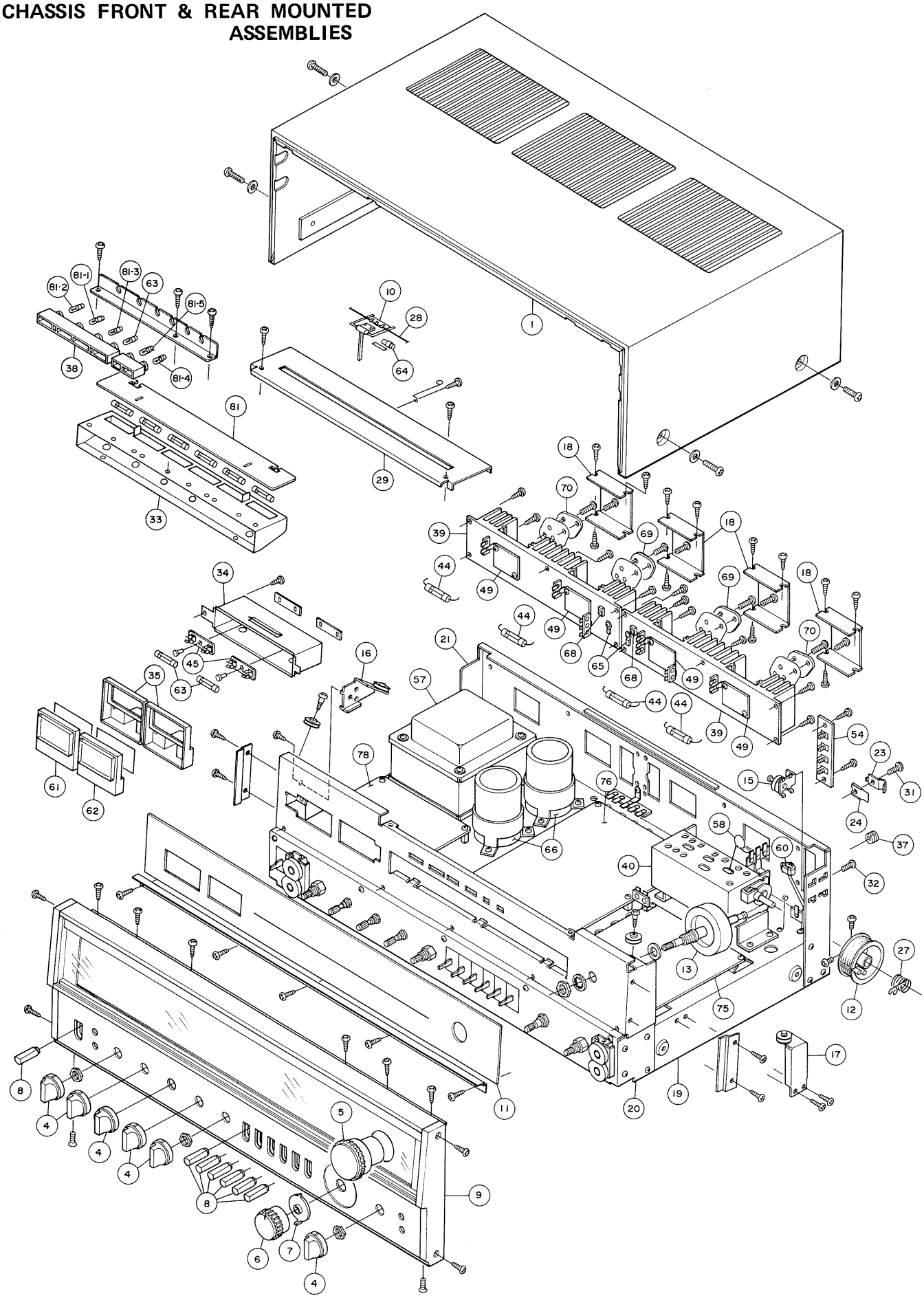


RS-1056

EXPLODED VIEW OF CHASSIS
BOTTOM MOUNTED ASSEMBLIES

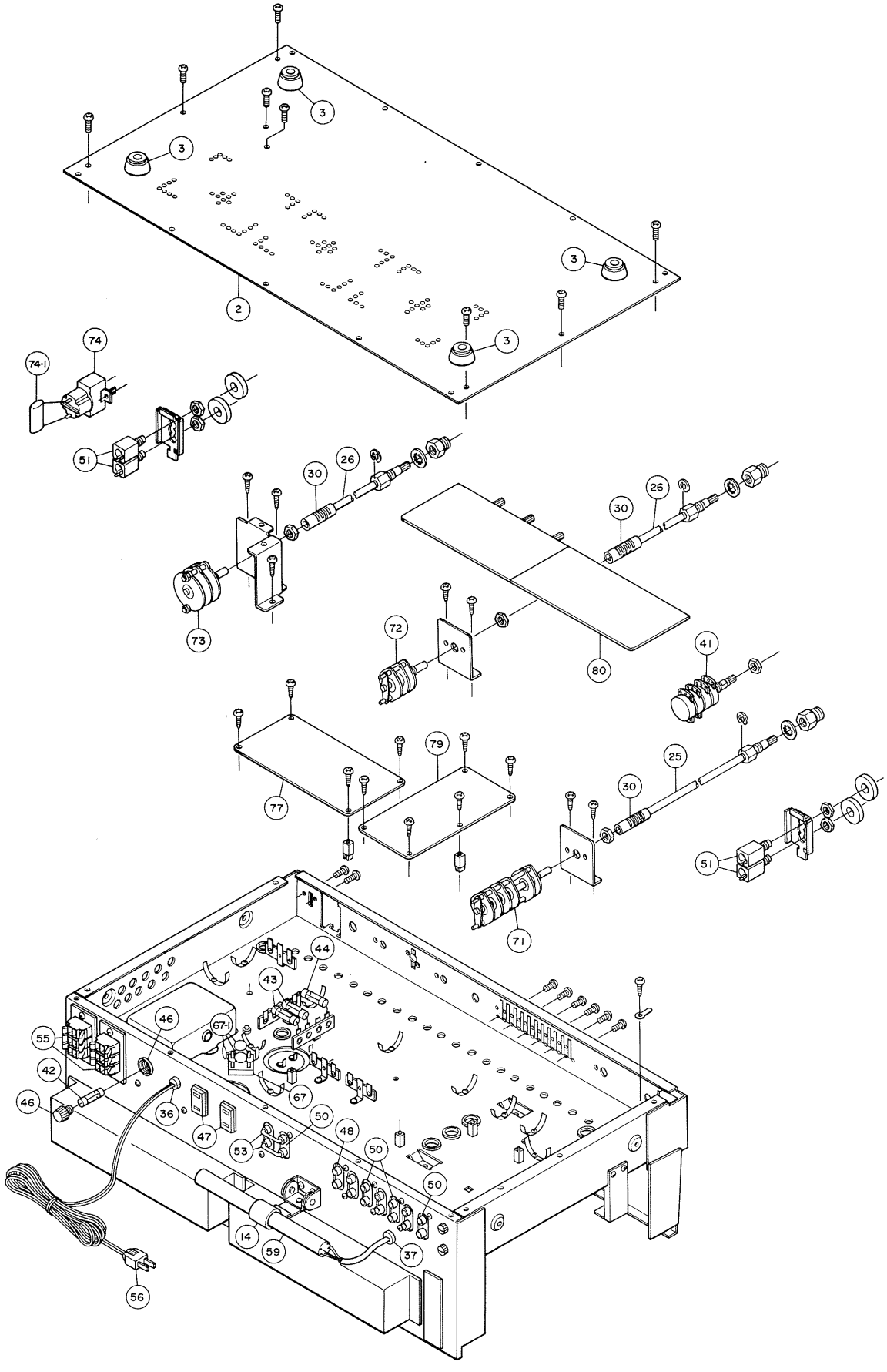


EXPLODED VIEW OF CABINET AND CHASSIS FRONT & REAR MOUNTED ASSEMBLIES



RS-1058

EXPLODED VIEW OF CHASSIS
BOTTOM MOUNTED ASSEMBLIES



PARTS LIST

CABINET PARTS LIST

Ref. No.		Part Number	Description
1		1310 1101 08700	Cabinet Assy
2	*	1312 1105 17800	Plate Bottom
3	*	1312 1801 13200	Leg

APPEARANCE PARTS LIST

Ref. No.	Part Number	Description
4	1310 1001 35500	Knob, Controls
5	1310 1001 41500	Knob, Tuning
6	1310 1001 36000	Knob, Volume
7	1312 1601 40400	Knob, Balance
8	1310 1001 36100	Knob, Lever Switch
9	1310 1016 24800	Panel Decorate Assy (RS-1056)
9	1310 1016 24900	Panel Decorate Assy (RS-1058)
10	1310 3011 16800	Dial Pointer Assy
11	1312 1201 28400	Plate Dial (RS-1056)
11	1312 1201 28500	Plate Dial (RS-1058)

CHASSIS PARTS LIST

Ref. No.		Part Number	Description
12		1310 3002 11300	Drum Assy Tuning Gang
13		1310 3003 19100	Tuning Shaft Assy
14		1310 3008 11702	Support, Antenna Assy
15	*	1310 3020 05800	Pulley Assy Panel Rear
16	*	1310 3020 07400	Pulley Assy Panel Front (Left)
17	*	1310 3020 07500	Pulley Assy Chassis (Right)
18		1312 1410 15100	Cover Power Transistor (RS-1056)
18		1312 1410 15400	Cover Power Transistor (RS-1058)
19	*	1312 3301 21900	Chassis
20	*	1312 3305 20300	Panel Front
21	*	1312 3306 22603	Panel Rear (RS-1056)
21	*	1312 3306 22604	Panel Rear (RS-1058)
23		1312 3621 00400	Clamp, 75 ohm Coax.
24		1312 3621 00500	Base, Coax. Clamp
25		1312 4103 11400	Metal Shaft Rotary SW (Long)
26		1312 4103 11500	Metal Shaft Rotary SW (Short)
27		1312 4111 00400	Tension Spring
28		1312 4112 10200	Dial Cord
29		1312 4120 11700	Slide Rail Dial Pointer
30		1312 4121 00100	Coupling (Nylon)
31		131 2 4201 12701	Screw, Panel Rear
32		1312 4201 15400	Screw, Panel Rear (Ground)
33		1312 6110 23701	Housing, Dial Lamp P.C.B.
34		1312 6110 26100	Housing, Meter Lamp
35		1312 6110 26200	Housing, Meter
36		1312 6111 11300	Bushing, Line Cord
37		1312 6111 14200	Bushing, AM Antenna Lead
38		1312 6111 19700	Housing, Stereo Beacon Lamp (RS-1056)
38		1312 6111 19800	Housing, Stereo Beacon Lamp (RS-1058)
39		1312 6201 23100	Heat Sink (RS-1056)
39		1312 6201 23200	Heat Sink (RS-1058)

NOTE:* Asterisk indicates not a service part

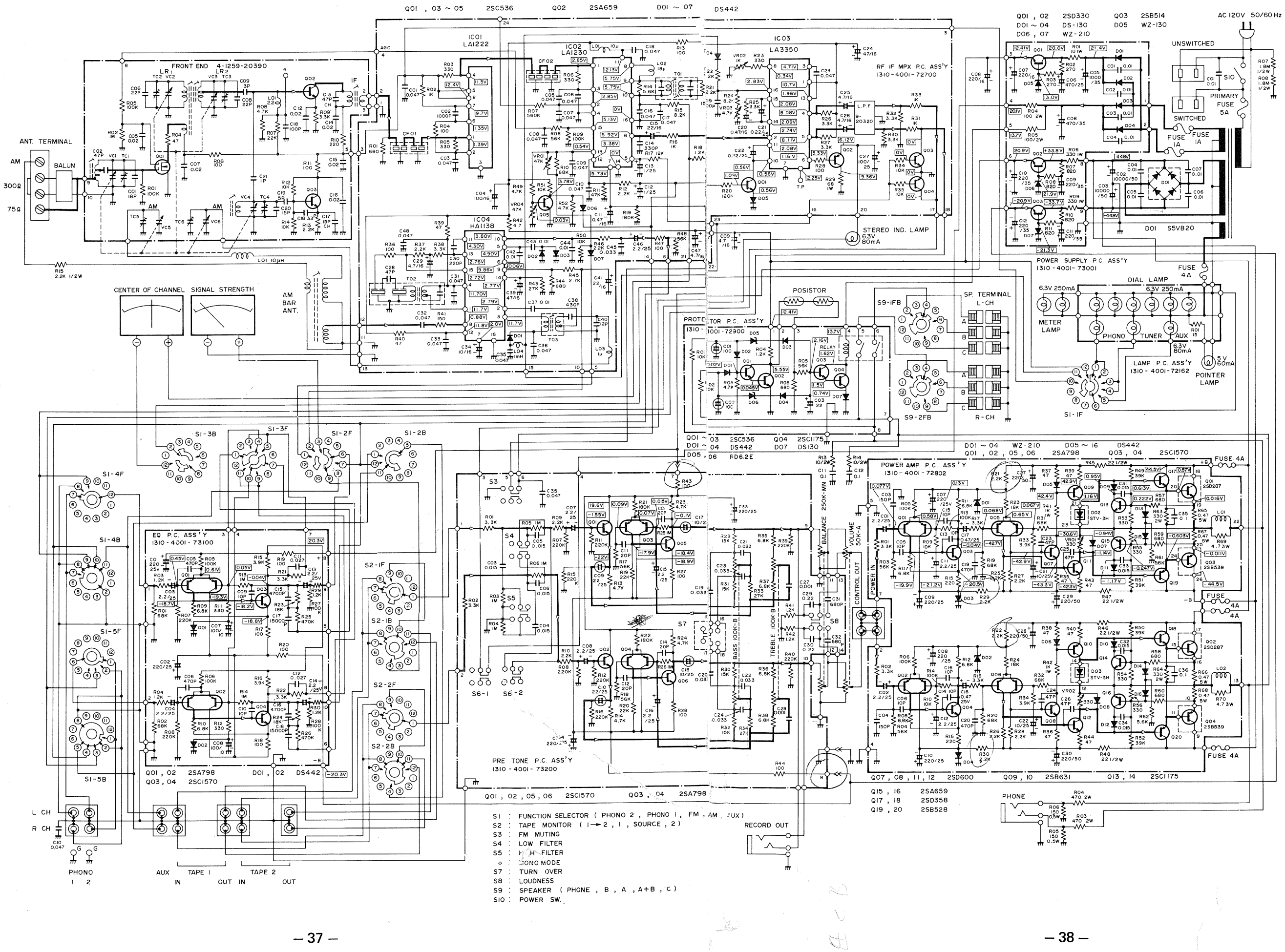
PARTS LIST

ELECTRICAL PART LIST

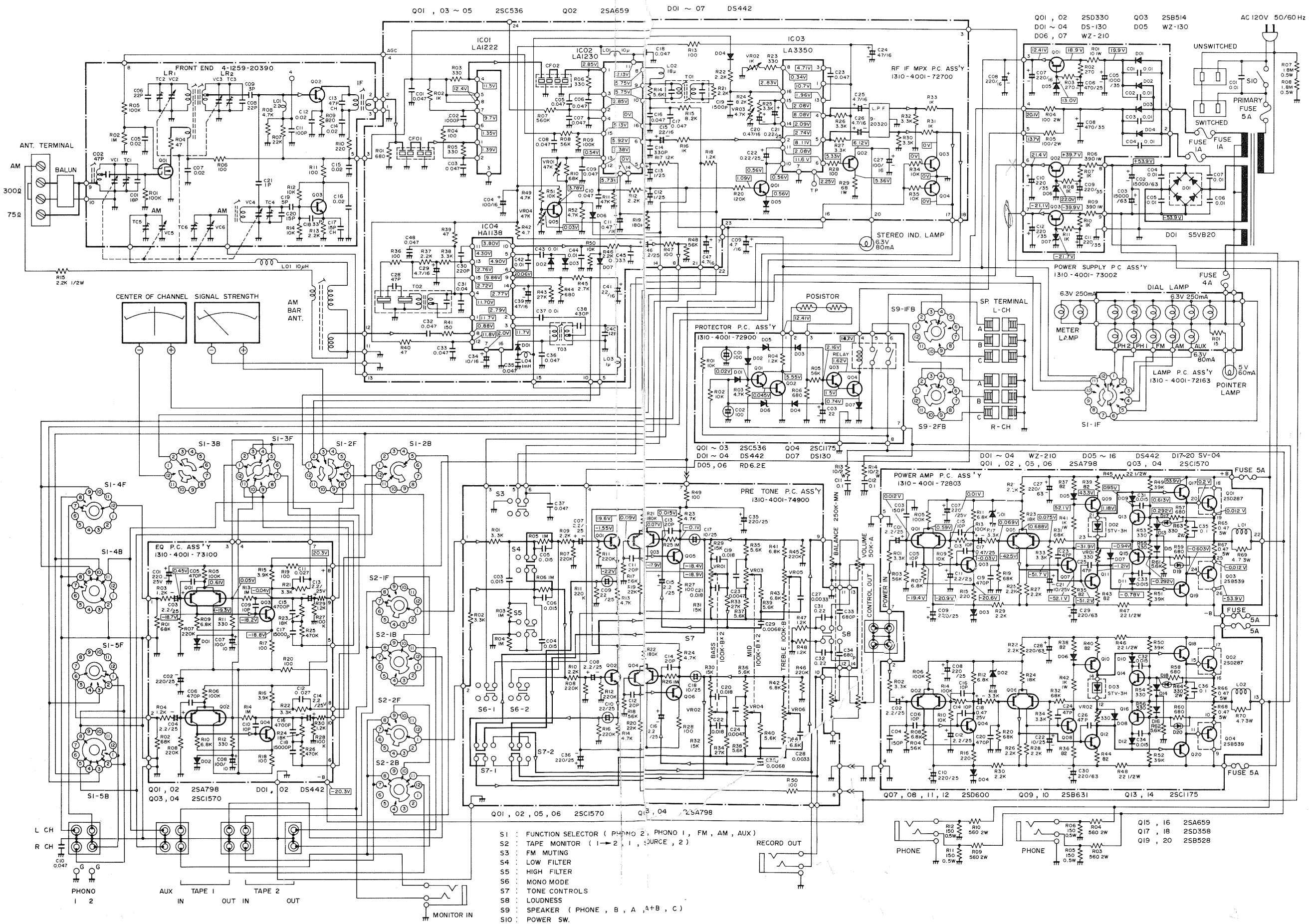
Ref. No.	Part Number	Description
40	4 1259 20390	Front End (Component parts used in Front End are not serviceable and available.)
41	4 2229 25490	VR A-50k, MN-250k
42	4 2349 20910	Fuse 5A AC
43	4 2349 21300	Fuse 1A
44	4 2349 21310	Fuse 4A (RS-1056)
44	4 2349 21380	Fuse 5A (RS-1058)
45	4 2359 20161	Holder Lamp (RS-1056)
45	4 2359 20160	Holder Lamp (RS-1058)
46	4 2359 21110	Fuse Holder
47	4 2359 21960	Socket
48	4 2359 22130	RCA Pin Jack 2P
49	4 2359 22440	Socket Transistor
50	4 2359 22710	Socket 4P
51	4 2359 22730	Socket 1P
52	4 2369 20561	Plug 1P
53	4 2369 21220	Short Plug
54	4 2379 21460	Terminal, Antenna Connector
55	4 2379 21570	Terminal, Speakers Connector
56 *	4 2439 20720	Power Cord
57 (T-1)	4 2519 23761	Power Trans (RS-1056)
57 (T-1)	4 2519 24100	Power Trans (RS-1058)
58	4 2539 20430	Peaking Coil 10 μH (L01)
59	4 2579 25040	AM Antenna
60	4 2599 20300	Balun
61	4 5119 20670	Meter, Signal Strength
62	4 5119 20680	Meter, Center of Channel
63	4 6129 20280	Pilot Lamp 6.3V 250mA
64	4 6129 20592	Small Lamp Indicator 5V 60mA
65	HII-PTH487A-BE	Posistor Protector
R15	R2HCPK222A	Resistor Solid 2.2k ohm 1/2W ±10 %
66 (C02,03)	4 2239 20990	Capacitor Electrolytic 10000 μF 50V (RS-1056)
66 (C02,03)	4 2239 21160	Capacitor Electrolytic 15000 μF 63V (RS-1058)
C08	C1CRE-227A	Cap. Electrolytic 220 μF 16V
C09	C1EUEM475A	Cap. Alsicon 4.7 μF 25V ±20 %
C10	C1HYDZ473A	Cap. Ceramic 0.047 μF 50V +80,–20 %
C11	C1HFRM104A	Cap. Mylar 0.1 μF 50V ±20 %
67	DDD-S5VB20	Diode S5VB20 (Power Supply)
67-1 (C04,05 06,07)	C2HYDP103A	Cap. Ceramic 0.01 μF 500V +100, –0 %
68	DAA-STV-3H--W	Diode STV-3H (Idling Bias)
69 (Q01,02)	TNN-2SD287A-Q	TR 2SD287A
70 (Q03,04)	TNN-2SB539A-Q	TR 2SB539A
R03,04	R3DXPK471A	Resistor Oxide Metal Film 470 ohm 2W ±10 % (RS-1056
R03,04	R3DXPK561A	Resistor Oxide Metal Film 560 ohm 2W ±10 % (RS-1058
R05,06	R2HXPK151A	Resistor Oxide Metal Film 150 ohm 1/2W ±10 %
R07,08	R2HCPK185A	Resistor Solid 1.8M 1/2W±10 %
R09,10	R3DXPK561A	Resistor Oxide Metal Film 560 ohm 2W ±10 % (RS-1058)
R11,12	R2HXPK151A	Resistor Oxide Metal Film 150 ohm 1/2W ±10 %
R13,14	R3DXPK100A	Resistor Oxide Metal Film 10 ohm 2W ±10 %
71(S-01)	4 2319 34150	Switch Rotary Function
72(S-02)	4 2319 34130	Switch Rotary Tape Monitor
73(S-09)	4 2319 34140	Switch Rotary Speaker
74(S-10)	4 2319 34160	Switch Lever Power
74-1 (C01)	C2JNRM103C	Capacitor Polypropilene 0.01 μF 630V ±20 %
75 *	1310 4001 72700	AM, FM RF/IF MPX PC Assy
76 *	1310 4001 72802	Power AMP PC Assy (RS-1056)
76 *	1310 4001 72803	Power AMP PC Assy (RS-1058)
77 *	1310 4001 72900	Protector PC Assy
78 *	1310 4001 73001	Power Supply PC Assy (RS-1056)
78 *	1310 4001 73002	Power Supply PC Assy (RS-1058)
79 *	1310 4001 73100	EQ PC Assy
80 *	1310 4001 73200	PRE Tone PC Assy (RS-1056)
80 *	1310 4001 74900	PRE Tone PC Assy (RS-1058)
81 *	1310 4001 72162	Dial Lamp PC Assy (RS-1056)
81 *	1310 4001 72163	Dial Lamp PC Assy (RS-1058)

NOTE: * Asterisk indicates not a service part

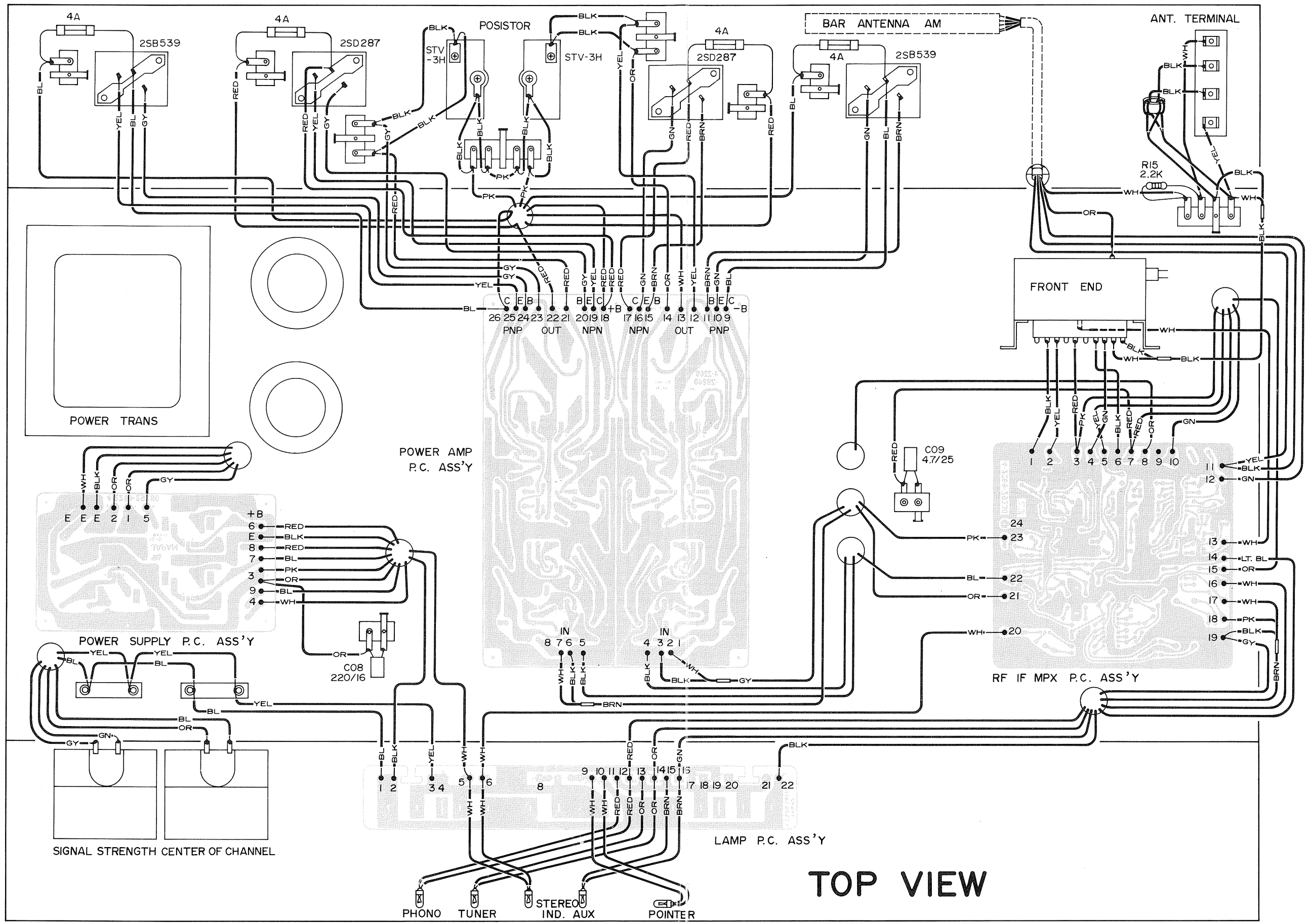
SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM



POINT TO POINT WIRING DIAGRAM



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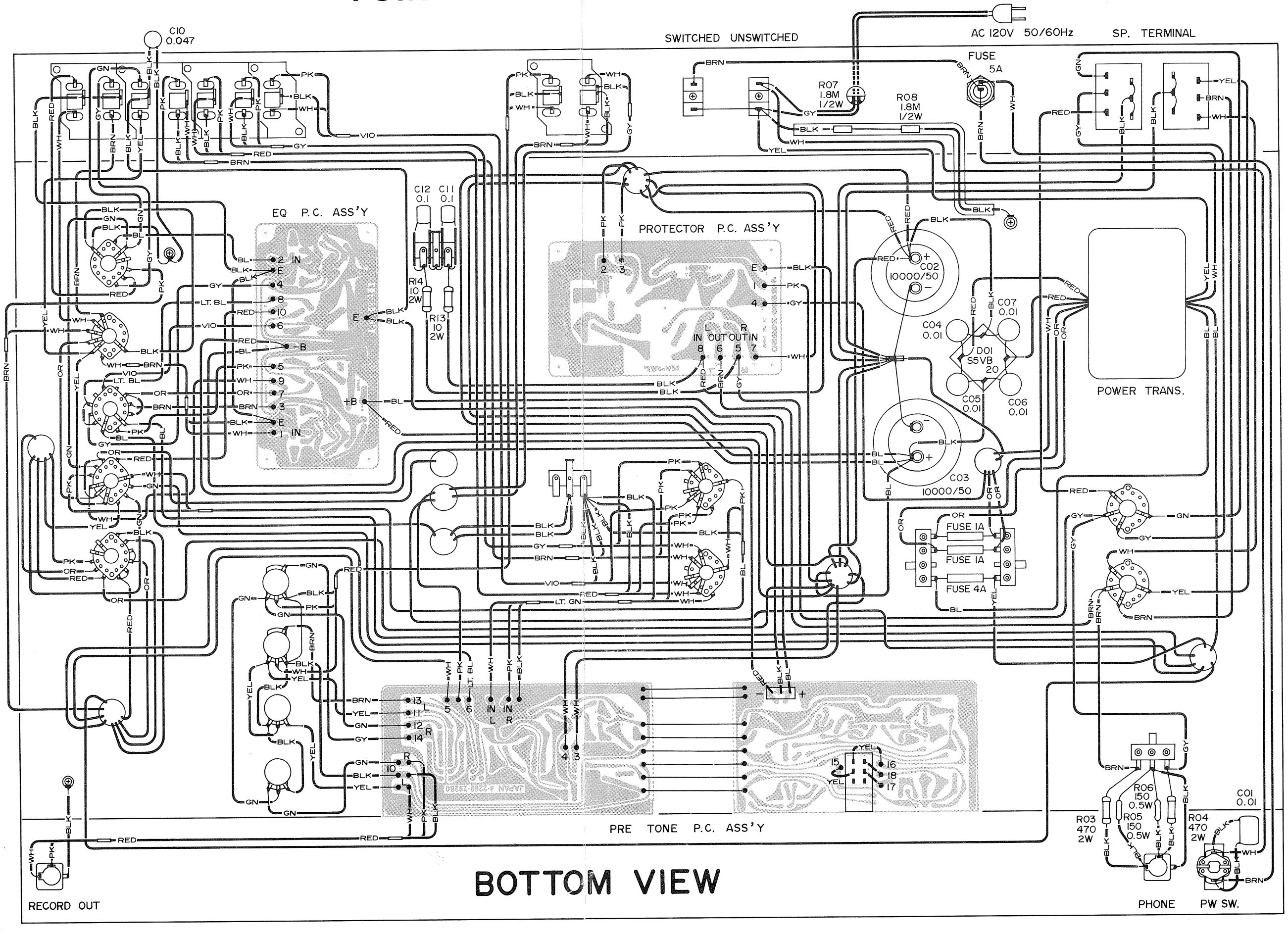
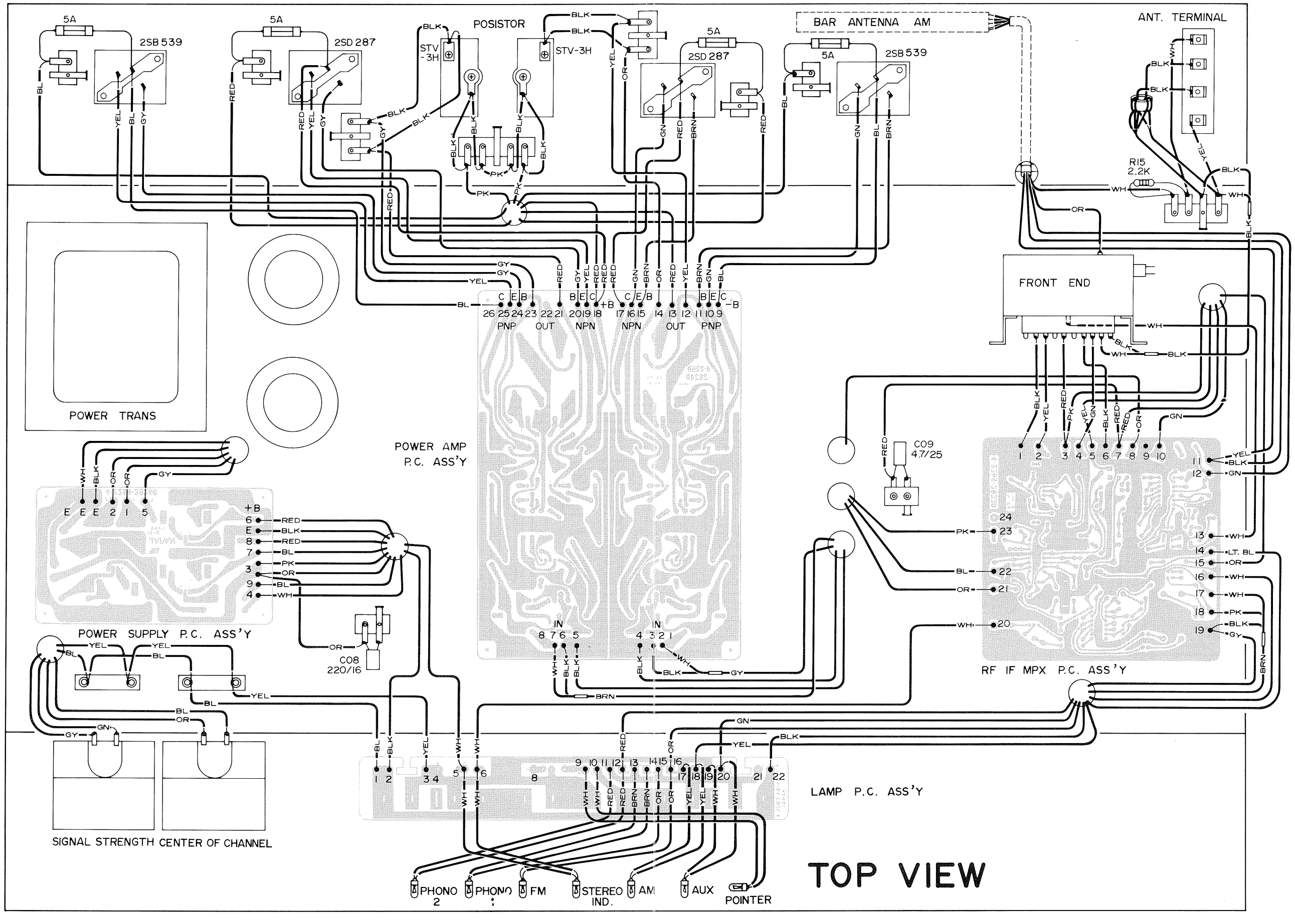


BOTTOM VIEW

POINT TO POINT WIRING DIAGRAM



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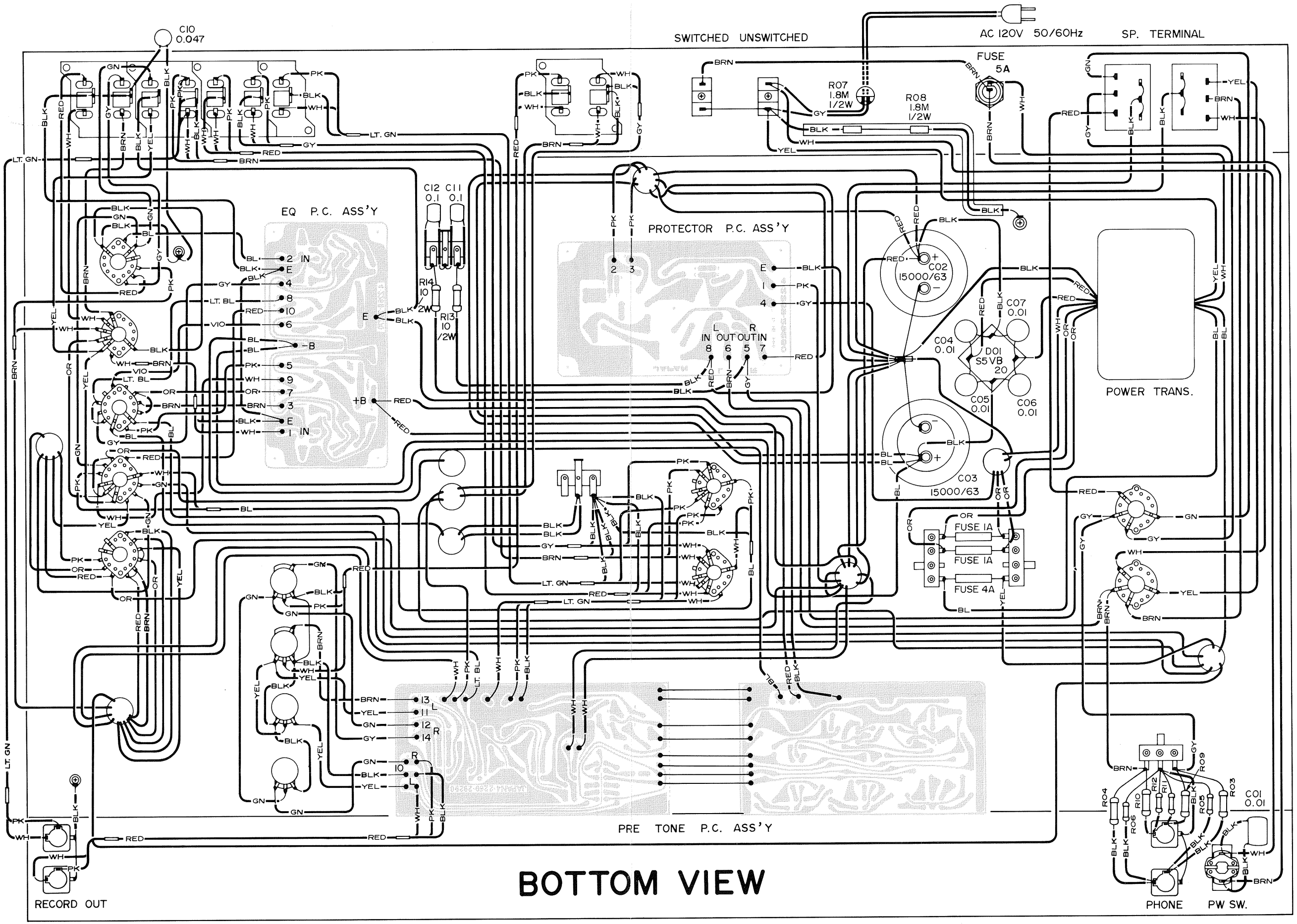

BOTTOM VIEW